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ABSTRACT

Rural school districts face nearly insurmountable obstacles to implementing the comprehensive special education programs mandated by PL 94-142, Education for All Handicapped Children Act. In order to identify workable strategies for rural special education delivery, a survey was conducted among state and local education agencies in 19 states representing all major economic and cultural groups and geographic regions in the 50 states. Questionnaires were developed to obtain characteristics of the school district, the area served, and the school special education clients; to identify the special education strategies used and their relationship to the main components of PL 94-142 (i.e., least restrictive environment, parent participation, IEPs, and procedural safeguards); and to determine the cost factors of delivery systems. Site visits were made to 14 states; additional information came from telephone interviews. A variety of statistical methods will be used to analyze the survey data, e.g., to determine the factors that contribute to school districts' effective or less-than-effective compliance with PL 94-142. These results will be used as sources of information for three subsequent phases of this study which will develop and disseminate innovative models for training personnel to provide services to handicapped children in a variety of rural subcultures. (JH)

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FINAL PROJECT REPORT

OF THE

NATIONAL RURAL RESEARCH PROJECT

A 1978-1979 Special Project
funded by:
Division of Personnel Preparation
Bureau of Education for the Handicapped
United States Office of Education

Coordinated by:
Center for Innovation and Development
College of Human Development and Learning
Murray State University
Murray, Kentucky

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INTRODUCTION

Rural Handicapped--the Doubly Disadvantaged

Two-thirds (67%) of the nation's 16,000 public school districts are classified as either "rural," "remote," or "isolated" because of sparse population or geographic location including mountains, deserts, or islands. More than 15 million children ages 5-17 are enrolled in rural schools (districts of 2,500 students or less).

Paradoxically, there are more students (32.3%) in nonmetropolitan schools than there are in central city schools (28.8%). Because nonmetropolitan areas have been gaining in population since 1972, it is apparent that the rural constituency will continue to be a sizable one well into the future (Sher, 1978).

Traditional problems associated with implementing comprehensive special education programs in urban districts are compounded in such areas. Problems related to organization, finance, personnel, supportive and transportation services present almost insurmountable obstacles to adequate development of special education.

In addition, in contrast to the comprehensive human service programs that serve as adjunctive services and programs to urban special education programs--both for middle class as well as for socioeconomically disadvantaged families--such services are severely limited in rural areas.

Frequently, no special education or supportive services staff exists. In fact, the majority of the rural districts in the United States

consist of a superintendent, a part- or full-time principal (sometimes also serving as an instructional staff member), several regular educators, and one or more generic special educators who may serve as the teacher of a self-contained unit or as a resource to one or more districts, spread over as many as 400 miles.

Small school systems, therefore, are placed in the position of dealing with various social, behavioral, familial, and economic problems of children and their families which would be dealt with by community agencies and organizations in an urban setting.

Since a child's academic functioning is so directly related to how well he functions in other facets of his life experiences, the implication for rural school systems to develop human services within their own organizational structures is quite obvious. Various studies have indicated that rural school personnel are, in fact, expected to be "all things to all people" vis-á-vis personnel in areas with a greater availability of specialists (Helge, 1977; Clapp, 1974).

Many advocates for the two-thirds of all U.S. schools which are classified as rural, remote or isolated feel that rural education issues and institutions have not been treated equitably and appropriately by the literature and by state and federal education agencies. Heller (1975) relates that an inappropriate preponderance of educational articles, research, and noted lectures have addressed ghetto areas and their complex array of educational problems. Special education literature has been permeated by articles dealing with urban crises due to lack of services and/or inflated prevalence figures of the handicapped in inner city populations. Heller feels that the existent crisis in urban special education was exaccerbated by this phenomenon and that equivalent crises in rural

education were obscured by the intensity of this attention to the urban crisis. He further states that although a great segment of our population of normal and handicapped children reside in rural populated areas, they are a minority group in terms of our nation's educational objectives and focus. Sher (1978) also feels that federal and state education agencies are much more acutely aware of the problems facing large cities than they are of the smaller towns and/or villages with 1,000-2,000 or less population. Heller stresses a caveat to society against doubly disadvantaging the handicapped in rural areas by offering low potential prospects for receipt of appropriate services to maximize the accommodation of one's handicap, stating that this is unfortunately more the rule than the exception.

The concerns of Heller and Sher are valid. Urban problems have also been more visible because of easier access to such areas and more focus on urban areas by media and well-organized interest groups. Despite the fact that 32% of all children live in rural areas, encompassing 67% of all local school districts, as late as 1978, there was not a single federal employee (let alone a bureau or division) anywhere within the Department of Health, Education, and Welfare whose assignment was to assist, analyze, or work with America's rural schools. Not surprisingly, an overwhelming proportion of federally funded programs, research, and demonstration projects have focused on the concerns of inner cities and large metropolitan areas. According to HEW Congressional testimony, only 5% of all research dollars, 11% of library and materials funds, 13% of basic vocational aid, 13% of dropout prevention funds, and disproportionately low levels of most other federal education funds are awarded to non-metropolitan areas (Sher, 1978).

Many factors contribute to this: (1) rural administrators are usually underpaid and thus often less qualified than urban administrators, (2) rural schools do not serve the numbers of students larger districts accommodate and usually qualify for less funds, and (3) rural schools usually do not have experienced grant writers in their employ.

This type of unintentional discrimination inhibits attempts to improve services for the 15 million rural children, almost a majority of whom live in poverty. According to Kaye (1976), although only 32.3% of all persons live in non-metropolitan areas, 40.7% of all rural residents live in poverty.

The Numbers Game--Too Few, Yet Too Many

Based on incidence predictions of the U.S. Office of Education, one would expect 1.8 million of the total 15 million rural children to be handicapped. However, a report by the National Conference on State Legislatures and the National Rural Center indicated that at least 5.3% of all rural school-aged children are not enrolled in any school. This percentage represents twice the nonenrollment rate found in urban areas. A preponderance of handicapping conditions was cited as the major reason for nonenrollment because of (1) lack of available special education services and/or (2) lack of parental information concerning such services (Education of the Handicapped, June 6, 1979). These data reporting lower numbers of handicapped students identified and served (inadequately or inappropriately) in rural than in non-rural areas have been supported by other studies (Helge, 1976). Farber (1962) also postulated that the extent of handicapping conditions is proportionately larger in rural areas.

Existing and traditional arrangements for administering schools in sparsely populated areas have generally precluded the provision of

special education services to handicapped students (Isenberg, 1970). Vast land areas, scattered populations, and lack of services for low-incidence handicapping conditions have become obstacles for the development of special programs requiring highly trained and specialized personnel and specialized facilities and equipment. The absence of services to individuals with low-incidence handicaps and few services to other preschool and school-aged children have facilitated progressive deterioration of handicapping conditions of many students in rural areas. Development of secondary handicaps resulting from lack of assistance regarding primary handicapping conditions has also occurred (Farber, 1962; Isenberg, 1970).

As there are higher proportions of persons in rural than in urban areas who receive no or poor prenatal care and other direct health services, related handicapping conditions have been found to be proportionately higher in rural areas (Farber, 1968). A greater prevalence of lower socioeconomic conditions in rural areas has also been related to higher incidences of handicapping conditions in such areas (National Institute of Education, 1975). Coupled with a higher degree of nonexistence of early childhood handicapped programs, it may be assumed that many rural handicaps are "functional" and/or cultural handicaps.

It may be concluded that a greater number of handicapping conditions and particularly secondary, severe, or multiple handicaps are prevalent in rural areas. In fact, the term "multi-handicapped" was related as appropriate to the handicapped students in their districts by a large majority of conference participants in the 1976 National Conference Providing Technical Assistance and Support to Non-Urban School Systems in Implementing Comprehensive Special Education Programs, sponsored by the

Murray State University Center for Innovation and Development. Sixty-five percent of the participants stated that there were few "pure" handicaps in their districts and that the U.S. Office of Education estimate of 2.2 as the average number of handicaps per person was reified in their rural districts (Helge, 1976).

Misapplication of Urban Service Delivery Models

A study of the Office of Rural and Human Development (1976) specified that failure to acknowledge that "rural is different" has led to application of urban service delivery approaches and models in rural settings. (Inherent) false assumptions have been employed in such applications that the urban models are appropriate and that the necessary infrastructure exists and will somehow be utilized to insure that services reach the handicapped and others who need them.

It has been clearly identified that rural areas, rural schools, and handicapped educational service delivery systems are different not only from urban areas but from each other. In fact, the National Institute for Education (NIE) and Rural Futures Project (1975) postulated that the one factor that makes it difficult to develop a sound picture of the problems and conditions which characterize rural education is the great diversity within rural America. NIE project staff stated that to ignore the diversity within rural education would only compound the earlier failure to recognize the differences between rural and urban education. The problems of a handicapped student in an area where the next closest handicapped student is 300 miles away is optimally met with different strategies than the problems of the handicapped child in another rural area whose main delivery problem revolves around administrative apathy.

However, due to the paucity of information about problems in rural education in general and rural special education in particular, the small amount of information that has been available has generally been idiosyncratic to a particular rural subculture, district, or state structure. Because there has been almost no systematic data gathering by federal or other national agencies within rural districts, there has been a tendency to extrapolate information about very divergent districts or states to other rural subcultures (Education of the Handicapped, June 6, 1979).

Associated Cost Problems

One particularly problematic issue in identifying successful and unsuccessful special education models for service delivery is that the cost per unit of specialized services is higher in rural areas than urban areas due to less professional resources available, transportation barriers, and other attributes of rural areas (Offices of Rural and Human Development, 1975).

Dr. John Kidd (1970) recorded the first recognized cost-efficiency estimates for rural districts attempting to provide special education services, prior to the passage of PL 94-142 and its mandates, including the Least Restrictive Environment. He stated that although other legal, fiscal and administrative considerations must be examined in addition to the needed general or particular population base, special services for school-aged children needing full-time special classes for "high general learning disability" would be most effective and economically efficient with a general population base of 50,000 students (Kidd, 1970).

Yet the U.S. Census Bureau classifies all geographic areas having a population of 2,500 people or less as rural and, as reported earlier,

there are 11,000 rural local school districts in the United States. These districts include many one-room schoolhouses, some of which educate only two, three, or four students per year. Due to the geographic nature of the ruralness of many of these schools, e.g., isolation caused by mountains, deserts, and islands, it is obviously infeasible to employ Dr. Kidd's model of a general population base of 50,000 for cost-efficient service delivery strategies.

To compound the problem, PL 94-142 emphasizes a full continuum of services in the Least Restrictive Environment and specifies that districts applying for funds of under $7,500 will not receive funding. This mandate for cooperative organizational structures presents further unknowns regarding the numbers of students per population base which may be most effectively and efficiently served with various delivery strategies. An additional burden to rural school districts was elucidated in a National School Boards Association survey to assess costs of educating handicapped children according to the mandates of PL 94-142. The survey indicated that small school districts have experienced the sharpest increases in special education costs of all U.S. districts (Education of the Handicapped, June 20, 1979).

Personnel Needs

The Council for Exceptional Children CASE Division Research Committee, as part of its national information needs survey, identified rural district inservice and service delivery improvements as high needs priorities. Numerous studies have indicated that one of the first solutions to solving problems of rural handicapped students will be alternate innovative uses of manpower (National Institute of Education, 1975;

Offices of Rural and Human Development, 1976; Western States Topical Conference, 1975; Helge, 1976). The above sources agreed that teacher training institutions have generally not considered special rural needs and circumstances in designing their programs. Also addressing this concern, the National Education Association (NEA) in the 111th Annual Meeting of the Resolutions Committee, passed Resolution 77-11, stating that institutions of higher education and State Education Agencies should be encouraged to promote training of personnel which will reflect specific needs and problems of rural teachers.

In addition to professional personnel needs, although many states in their Annual Program Plans stated that paraprofessionals could effectively fulfill up to 65% of new personnel needed for implementation of PL 94-142, this practical manpower source has not been widely adopted in rural schools. This approach, demonstrated and validated, is especially valuable in the prevalent types of rural areas that offer more trust to indigenous paraprofessionals than to other service providers (Campbell, 1977).

Major leaders in the field of special education have emphasized that special educators cannot and should not attempt to meet all of the needs of handicapped students (especially in rural areas), and that there is a considerable need to "re-tool" rural regular education personnel to work with special needs students (Smith, 1977). However, in practice, although PL 94-142 specifically states that Individual Education Plans (IEPs) are to be developed by an interdisciplinary committee, many rural districts are currently assigning this responsibility to the special education teacher(s) in the district or to a district counselor. This not only inhibits the effectiveness of the education of the child but impacts attitudes in a negative way regarding the "burden" of special education.

The crux of the problem appears to be that rural districts generally are not aware of alternate and creative uses of existing manpower. Extensive data were gathered from rural administrators, teachers, support personnel, parents, and teacher-trainers attending the National Conference Providing Technical Support and Assistance to Non-Urban School Systems in Implementing Comprehensive Special Education Programs. The size of districts represented ranged from 694 to 30,000 in numbers of school children, and the total number of handicapped children served ranged from two to five percent. The greatest concerns or problems specified by participants in this conference were (1) the need for appropriate personnel preparation (85%), and (2) adequate funding for special education programming (70%).

The 70% of participants who identified funding as their most critical concern because of their location in sparsely populated areas related that they had inadequate numbers of handicapped children needing certain types of services for additional "units." A related concern was that 85% of the participants stated that additional inservice training was needed regarding effective strategies for delivering services in rural areas. Data analysis clarified that apparently participants were not aware of creative options for using personnel through cooperative planning and programs, alternate use of funds for arrangements along the continuum of services other than self-contained classrooms, and alternate teaching roles to fulfill Least Restrictive Environment requirements (Helge, 1976).

It was determined that participants were generally unaware of roles such as consultant teacher, itinerant teacher, diagnostic-prescriptive teacher, resource room teacher, paraprofessional assistant, crisis teacher, and hospital/homebound teacher. Most of the personnel queried from the districts were planning to seek funding from their State Education Agencies

for either "another educable mentally handicapped unit" or additional speech and hearing services to implement PL 94-142. Previous studies have indicated an overabundance of these two services in rural areas, particularly EMH/EMR services. In fact, many times this has been reflective of misplacement (Dunn, 1968), and certainly not facilitative of the implementation of PL 94-142 mandates regarding student placement in the Least Restrictive Environment.

Rural populations and attendant tax bases are not expected to increase significantly. PL 94-142 funding is only available for excess costs of educating handicapped students. Regular and special educators need to be better prepared to fill a variety of functions in diverse instructional arrangements (in order to compensate for some of the present manpower shortages in rural schools). This will be particularly true as massive pressures (see Figure 1) including federal and state legislation, court cases, parental movements, inflation, and adverse community attitudes create a certain degree of chaos within rural local education agencies.

Affective Factors

Attitudinal factors are at least as problematic in special education service delivery as scarce resources and geographic barriers. A 1978 BEH Division of Innovation and Development study discerned from state education agencies that rural schools have low tolerances for a variety of handicapping conditions and conservative attitudes toward service delivery and potential achievements of the handicapped. Due to limited experience with handicapped children (because of extensive numbers of rural handicapped children being unidentified or unserved), the study found that rural districts typically incorporate a single thrust

IMPACTING VARIABLES ON RURAL SCHOOLS ATTEMPTING
TO PROVIDE FREE APPROPRIATE PUBLIC EDUCATION FOR HANDICAPPED CHILDREN

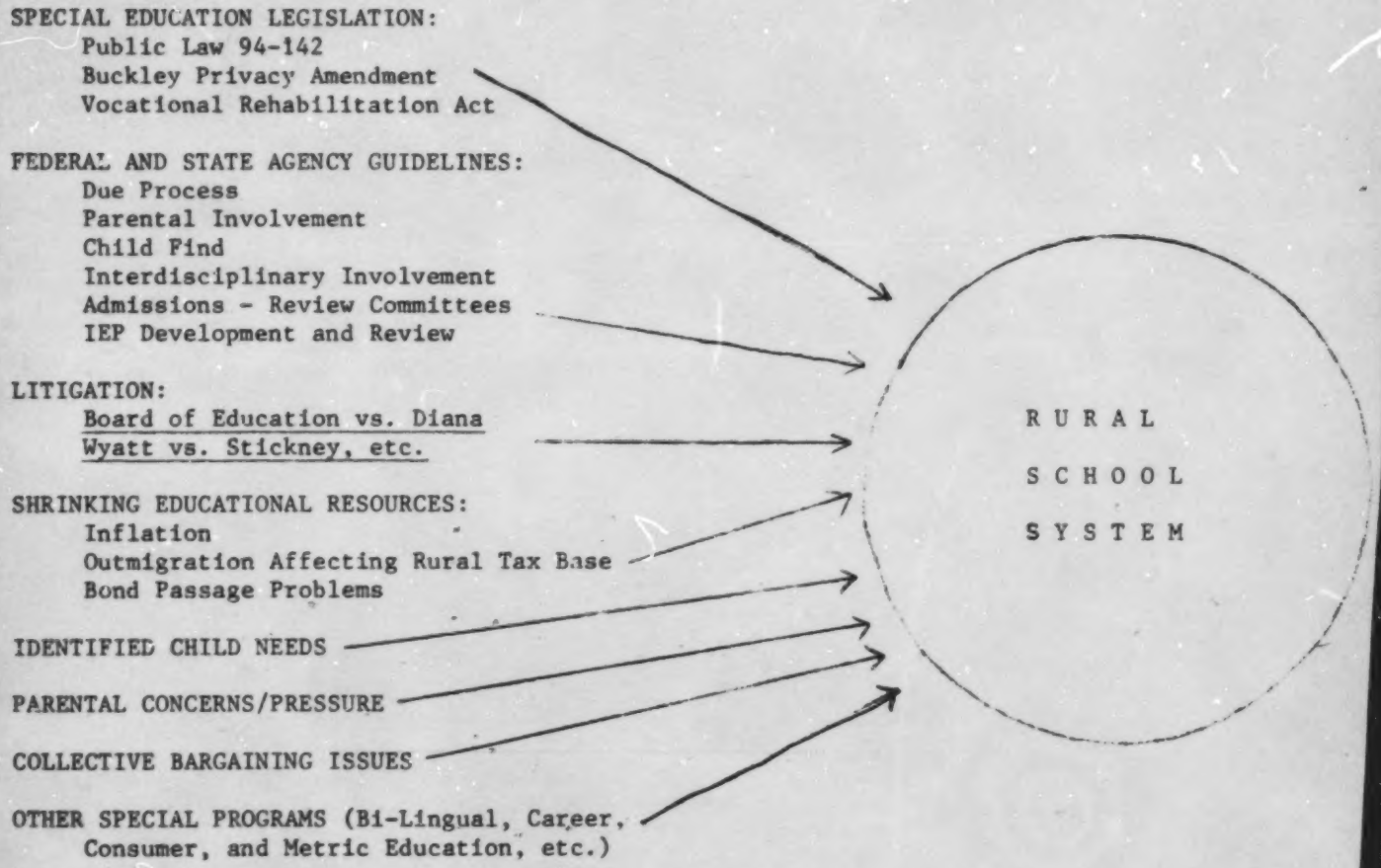


Figure 1

delivery approach such as self-contained classes which may or may not be appropriate for the particular special needs of that district (Morrissey, 1978).

Rural schools, particularly in isolated or remote areas, are generally in a monopoly status. Additionally, small communities are not only unaware that school quality could be improved but are unknowledgeable of parent and student rights. An attendant factor, involving role modeling, particularly in farming, mining, or other communities which often have low levels of educational attainment, is the feeling that traditional school operation or quality was "good enough for me/my parents, so why change it?" At variance with the Management-By-Crisis orientation of the central city district, rural districts are typically known for a Management-By-Tradition orientation. In fact, one of the prominent problems in initiating special education innovations may be explained by the frequent comment in rural schools: "It's never been done that way before."

Additionally, inbreeding is endemic to small, personable communities in which it is common to hire relatives, friends, and others who share the culture and perspectives of the community. This facilitates traditional programs and operations. Inbreeding and the professional isolation of many remote districts also limit the perspectives and "vision" of many rural faculty and can inhibit optimal standard-setting in needs assessment and goal planning processes.

There is no doubt that initiating comprehensive programming in rural areas necessitates creative utilization of scarce professional and other resources.

Needs for the National Rural Research Project

Related to the affective factors discussed above, rural school

systems are typically seen as chronically behind or ahead of the educational pendulum, depending on whether it is to the left or to the right. For example, when the myriad of programs for segregating special needs children was developed during the 1960's, rural schools were seen as quite recalcitrant. Many rural schools had neither the specialized professional resources nor the inclination to follow suit. As a majority of rural districts had never initiated self-contained units, they were "ahead" of the mainstreaming movement of the 1970's. (Likewise, rural districts are unpronounced "leaders" in the "back to basics" movement, having never had adequate resources to vary significantly from basic curriculum.)

For decades, state legislators and professional educators sought to ameliorate the problems of rural schools through consolidation and reorganization. Although such widespread efforts markedly reduced the number of one-room schools and small districts, the problems mentioned above were not significantly impacted.

There is no doubt that initiating comprehensive programming in rural areas necessitates creative utilization of scarce professional and other resources. While most of the objectives held for exceptional children in rural areas are similar to those determined relevant and meaningful for their urban counterparts, the means by which these similar ends are to be met differ widely between the dichotomous settings of city and country.

Many of the problems in effecting change in rural school districts have stemmed from the fact that "innovators" have been external entities directing the small school to change without: (1) surveying strengths as well as weaknesses and characteristics of the community and district, and (2) realizing the necessity to individualize service delivery strategies with respect to particular community and district characteristics. In

fact, most literature addressing rural service delivery systems and strategies has assumed equivalent resources and other district abilities, regardless of district size, to implement a continuum of services. When it is understood that rural schools range in enrollment from one to twenty-five hundred children and are located in geographical districts incorporating from less than 50 people to 50,000 citizens (NCES definition), the diversity in district structures becomes apparent. In isolated ranching country or on islands when only 1-10 children may be enrolled in a local one-room schoolhouse, the district may be part of a unification of several districts. The district itself may consist only of one teacher and part of the time of a multi-district superintendent. Teachers in such cases are often hired by parents of the constituents (e.g., a rancher hiring a teacher and housing him in a trailer on his one-million acre ranch).

Strategies for such districts obviously will differ in many cases from strategies for rural districts with 500 children located in small, impoverished mountain "hollows" or border towns.

Therefore, Robert Isenberg (1970), as Associate Secretary of the National Association of School Administrators, National Education Association, stated that one of the critical needs in special education was an intensive study of existing administrative patterns for providing special education service delivery strategies. This need was reiterated by the following rural special education conferences and studies sponsored by the Bureau of Education for the Handicapped (BEH), the Council for Exceptional Children (CEC), and higher education institutions:

1. "Delivery of Special Education Services in Rural Remote Areas," a 1973 conference jointly sponsored by three Southwest Regional Resource Centers and the National Association of State Directors of Special Education

2. Implementation of Special Education Services in Rural Remote Areas: An Ideabook, published by the Southwest Regional Resource Center after a follow-up activity to the 1973 conference

3. The 1966 conference co-sponsored by the Western Interstate Commission for Higher Education and the Montana State Department of Public Instruction

4. A study by the BEH Division of Innovation and Development (Morrissey, 1978)

5. The 1976 "National Conference Providing Technical Assistance and Support to Non-Urban School Systems in Implementing Comprehensive Special Education Programs," sponsored by the Murray State University Center for Innovation and Development (CID)

6. Rubin Altman, a "reactor" on the September, 1977 BEH Project Directors' Conference, and

7. The CEC Case Division Research Committee.

In addition, State Plan Officers of the BEH Division of Assistance to States reiterated in 1978 meetings a need for profiles of effective and cost-efficient service delivery strategies given various rural subcultures, to be available to state and local education agency personnel. State education agency personnel from across the United States reiterated needs for cost analyses of service delivery strategies in view of acutely scarce resources in rural education systems.

For these reasons, a 1978-79 BEH Special Project, the National Rural Research Project, was funded to nationally investigate state and local education agencies to determine problems and effective strategies in implementing PL 94-142 effectively and cost-efficiently. Via this project, the CID was to develop profiles of effective special education delivery systems and strategies (1) given specific rural community and district subcultures, and (2) based on systematic data-gathering techniques. The profiles were to interrelate (1) community characteristics (e.g., low

socioeconomic status community 250 miles from diagnostic specialists), and (2) school district characteristics (e.g., regular class teachers apprehensive about mainstreaming, lack of administrative support, lack of speech therapist, etc.) to (3) viable service delivery options.

Purpose of This Report

This report describes primary activities and outcomes of this BEH Special Project as well as broad implications of project findings. Activities of a subsequently funded (1979-81) BEH Regular Education Inservice (REGI) grant directed toward implications of project findings are also briefly reported. Anonymous detailed reports on individual states which participated in the project are available through the project director's office.

PROJECT OBJECTIVES

Characterization of Rural Special Education Service Delivery Systems (Phase I):

A. Identify facilitating and hindering factors which operate to determine the success or failure of district compliance with PL 94-142

B. Identify characteristics of rural special education service delivery systems which are effectively and efficiently implementing PL 94-142

C. Identify types, qualities, and efficiency of special education strategies that districts are using effectively in complying with PL 94-142.

METHODOLOGY

Project Philosophy

Small school literature usually speaks of the need to find alternatives which are not ideal but which hopefully will suffice and the need to weigh costs of highly technical or specialized services such as daily transportation of an itinerant teacher to a remote area versus more economical alternatives which are generally not as consonant with the principle of Least Restrictive Environment (e.g., residential placement) (Burrello, 1979). The real need is to (1) identify needs and resources and other characteristics of a particular district and community subculture, and (2) identify creative alternatives and modify for use in the district, analyzing effectiveness as well as efficiency (e.g., training the principal to be a crisis teacher if he is the only mobile resource in the school).

The following tenets have been central to the philosophy of this project design to develop innovative personnel preparation models for effective special education service delivery in rural America.

1. A problem-solving approach based on applied personnel competency needs research sould be incorporated into preparation program design.

2. Such an approach should involve a national study to identify successful and unsuccessful service delivery strategies which may be effectively utilized in a given rural subculture with its particular characteristics.

3. "Success" should be evaluated according to the effectiveness and efficiency with which a district provides a free appropriate public education for all handicapped children in the Least Restrictive Environment. The "efficiency" measure is especially important with rural programs because of limited financial and other resources.

4. Rural personnel preparation models should plan for optimal use of resources and amelioration of problems in rural areas and use PL 94-142 as a resource for systemic school change.

5. Models developed should prepare personnel for a variety of leadership, implementation, and support roles and incorporate ultimate flexibility in instructional and organizational models.

6. Such models should be interdisciplinary models developed for preparation of regular as well as special education personnel to work with rural handicapped children for accomplishment of infusion of special education into all areas of rural education and full implementation of the continuum of services philosophy. This concept is especially important in view of the implications of PL 94-142 for regular as well as special educators in working with mild and moderate handicapping conditions and because rural areas have fewer specialized resources and are required to be more generic than urban special educators.

Methodological Procedures of the Phase I Characterization Component

The project objective of characterizing successful rural special education service delivery systems became Phase I of a four-phase process being completed through the 1979-81 BEH-funded National Rural Project (NRP) mentioned earlier. The Implications chapter of this report, pages 105-107, will illustrate the use of 1978-79 Phase I characterization data to develop disseminable personnel preparation models based on profiles of effective service delivery strategies given particular rural district and community attributes.

Processes of the characterization component determined facilitative and hindering factors influencing the degree of success or failure of various rural school districts in America as they attempted to comply

with PL 94-142. To fulfill this broad objective, the characterization project assessed the following:

1. Characteristics of effective and ineffective schools including but not exclusive of the following:

   a. extent to which socioeconomic context aspects of the area being served helped characterize the district's effectiveness

   b. degree of importance of community factors on district functioning (e.g., effects of community resistance to change)

   c. important characteristics of school district related to special education service delivery (e.g., available alternate instructional arrangements, etc.)

   d. client characteristics (parents and families) of exceptional children

2. Effectiveness of child find strategies

3. Types and quality of special education strategies the district uses

4. Costs of the district service delivery system

5. Strategies enabling the district to achieve the standards of PL 94-142 for the least cost (e.g., inservice training programs)

6. Relationships of various characteristics to each other

   a. identification of emerging factors, dimensions, and patterns

   b. identification of patterns or factors discriminating between effective and less effective districts

7. Common and divergent patterns across states and across regions

8. Degree to which compliance data described particular problems of a district and delivery strategies being utilized.

Sequential Methods and Procedures

Phase I consisted of the following steps:

A. Selection of effective and less effective rural school districts

B. Development of data collection instruments and procedures

C. Pilot data collection and instrument revision

D. Initiation of data collection

E. Initiation of data analysis

Given budget limitations, the project was able to work with 19 (38%) of the nation's state education agencies (SEAs) during 1978-79. All major geographic, cultural and socioeconomic lifestyles of the United States were included in sampling techniques.

A. Selection of Effective and Less Effective Rural School Districts

Districts were considered rural when the number of inhabitants was less than 150 per square mile or when located in counties with 60% or more of the population living in communities no larger than 5,000 inhabitants. Districts with more than 10,000 students and those within a Standard Metropolitan Statistical Area (SMSA), as determined by the U.S. Census Bureau were not considered rural.

State department compliance statistics and other data were used to determine the most effective 5% of all districts in their states in meeting PL 94-142 mandates and the least effective 5%. (Example: Analysis of LEA data submitted to the SEA in required reports regarding "provision of related services," as listed in the Federal Register, August 23, 1977, Section 121a.13). From these pools, state department professionals aided in the determination of representative effective and less effective districts (e.g., state department personnel verified or disavowed compliance

information in LEA reports and added data regarding district characteristics and strategies). SEA personnel also considered representativeness of geographic, cultural and socioeconomic lifestyles of districts to be sampled.

The following are examples from the Federal Register, August 23, 1977, that were used in developing a criteria related to effective compliance with PL 94-142:

Sections	Contents re: LEA Mandates
121a.220	Child identification
121a.111	Confidentiality of personally identifiable information
121a.222	Full educational opportunity goal; timetable
121a.224	Personnel development
121a.225	Priorities
121a.226	Parent involvement
121a.227	Participation in regular education programs

B. Development of Data Collection Instruments

Questionnaires were developed for SEA and LEA site visits to characterize rural school districts and strategies utilized. The following categories of information were primary foci of the assessment. (Questionnaires are included in Appendix A.)

1. Socioeconomic context of the area serving the district
2. School district characteristics
3. Community characteristics
4. Characteristics of school special education clients

5. Special education strategies utilized and relationship to main components of PL 94-142 (Least Restrictive Environment, parent participation, IEPs, and procedural safeguards)

6. Cost factors of service delivery systems

The domain of variables from each category are shown below. These variables were delineated based on the needs identified by a comprehensive literature review and previous studies of rural districts.

1. Socioeconomic context of area serving district

   Ethnic composition
   Age structure
   Population concentration
   Principal types of employment
   Underemployment characteristics
   Poverty index
   Patterns of political power
   Degree of isolation (geographic bearing on social and/or professional isolation)
   Size of service area

2. School district characteristics

   Transportation characteristics
   Facilities (physical)
   Per pupil expenditures (special education and general education)
   Characteristics of ongoing district educational program
   Qualification and salary characteristics of teachers
   Role characteristics of teachers/administrators
   Characteristics of special education organizational structure (reporting structure, formal communication structure, physical relationships, etc.)
   Average number of pupils per school

3. Community characteristics

   Existence of universities and colleges
   Social and geographic mobility
   Support of educational programs
   Existence of specialized/professional resources
   Communication characteristics
   Transportation systems
   Attitudinal characteristics (resistance to change)

4. Characteristics of school delivery service population and their families

Family income characteristics
Family language characteristics (e.g., language spoken in the home)
Attitude characteristics toward special education services
Parental involvement in educational programs
Family characteristics (single parent families, etc.)

5. Special education strategies utilized and relationship to major components of PL 94-142 (Least Restrictive Environment, parent participation, IEPs, and procedural safeguards)

Special instructional materials and equipment service
Special education versus regular placement
Special education consultants
Itinerant teachers
Resource rooms
Part-time special classes
Self-contained special classes
Combination regular and special day school
Special day schools
Diagnostic and prescriptive teaching center
Hospital/homebound instruction
Use of private schools
Use of residential schools
Inter-district cooperative programs
Mobile diagnostic and prescriptive units
Mobile teaching units
Teacher consultant
Mobile inservice, preservice mobile unit
Non-categorical generic classes
Categorical classes (EMR, TMR, BD, LD, deaf and hard of hearing, partially sighted and blind); specify resource/self contained
Crisis teacher
Parent participation processes
Inservice training program
Curriculum development programs
Procedural safeguard processes
Student support committees
Supportive therapies--occupational, physical, speech, music, art
Mobile training
Transportation strategies
Student progress review program/IEP review
Program for implementing movement of children within system
Ratio of special education budget to regular program

Three main statistical analytic strategies have been used to interpret project data gathered in Phase I and will be used in the 1979-1981 NRP Project to prepare information for personnel preparation model development and service delivery training phases. First, the multivariant correlation and factor analytic techniques have been used to determine appropriate dimensions, and to group data into statistical and logical patterns.

Second, discriminate function analysis will be utilized to determine the factors that contribute to school districts' effective and less effective compliance with Public Law 94-142. The results of these analyses will be used as sources of information for model development and service delivery training.

Third, linear multiple regression analysis will be applied to the identified district and strategy types to determine optimal matches as a basis for developing the personnel preparation models.

6. Cost factors of service delivery system

A cost analysis model was designed to investigate four levels of cost factors associated with service delivery systems in rural areas. This model is depicted in the Accomplishments chapter, pages 37-48.

Pilot Data Collection and Instrument Revision

Several reasons led to the development of a set of general questions rather than modeling the project format after BEH compliance questions:

1. Certain types of compliance data were made available during visits with BEH personnel. These data were valuable in structuring finalized data collection instruments and processes and in suggesting states and subsequently, particular LEAs to visit.

2. It became readily apparent that some of the areas of inquiry were very sensitive from the point of view of state department personnel.

3. The BEH compliance questions were mainly directed at the state level, and this project focuses on the LEA level.

4. The overall project demands a broad data base utilizing many types of information that BEH is not presently able to obtain, although the Division of Assistance to States personnel and convened panelists for the National Rural Research Project determined such an information base as "critical for developmental purposes," and "a superior evaluation tool for Congress."

5. Project staff ascertained after initial visits to State Departments of Education that most states had "comprehensive evaluation data collection processes" relevant to parts of the project's needs. Use of these, where relevant, facilitated data gathering and inhibited data collection duplication.

The following questions were initially used as an interview guide in discussions with state department personnel:

1. Describe particular cultural, geographic, or socioeconomic patterns and lifestyles in your state which inhibit full implementation of the regulations of PL 94-142.

2. What areas or districts would represent very divergent economic lifestyles in your state?

3. What are some of the more effective methods that districts have instituted for child find activities?

4. What are some of the more effective district means of educating their communities about handicapped individuals and about facets of implementing PL 94-142?

5. What are some better examples of districts using Regional Resource Centers, Deaf-Blind Centers, Mental Health-Mental Retardation facilities and other external agencies to augment their own resources?

6. What are some of the key innovative practices in your state among any LEAs you could mention? Where are these innovative practices occurring?

7. In districts which are lagging the most in true implementation of PL 94-142, why is this occurring? Where are such districts? Is this related to some of the cultural, geographic, or socioeconomic patterns discussed above?

8. What data are available to review regarding some of the districts you mentioned that have some of the "best practices" in your state?

9. What data are available to review regarding some of the districts you mentioned having the most problems implementing PL 94-142 effectively?

10. What were your primary reasons or criteria for choosing the districts you chose as most and least effective?

During the initial stages of the 1978-1979 project, a number of the categories of the characteristic variables were expanded as a result of visits to state departments and the Bureau of Education for the Handicapped. For example, the attitudinal assessment as clarified and expanded is viewed as a Change Index to be used as an evaluation tool to assess change in rural districts. As such, the Attitude Change Index has components in the following categories:

I. School district Characteristics--to assess the staff:

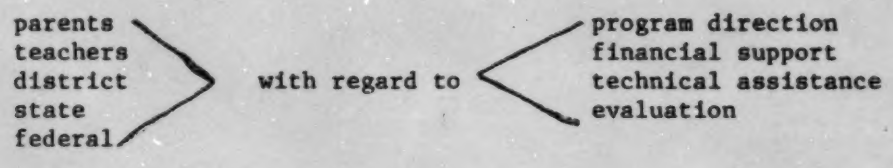
   A. Philosophical and practical concerns for the needs of individual children

   B. Openness to alternative practices

   C. Frame of reference from current service to desired service level

   D. Knowledge of handicapping conditions and services

   E. Attitudes concerning the locus of responsibility for service:



II. Community--to sample:

   A. Support of school programs

   B. Support of community programs

C. Resistance to change, to include religious orientation, conservative-liberal political structure, and attitudes toward the handicapped

III. Families of Service Population--to assess parent:

A. Involvement in programs

B. Attitudes toward programs

C. Knowledge of program alternatives for handicapped children

D. Knowledge of due process procedures

E. Level of experience with obtaining educational services

Experience, a comprehensive literature review, and BEH Division of Assistance to States personnel suggested that instruments explicate child find activities of local districts. A section was added to the originally proposed Phase I, as follows:

Child Find and Identification

1. Does the district have a practical method implemented to determine which children are currently receiving special education services and those who are not?

2. Does the district have a screening program with related criteria for determining the educational needs of individuals aged 3 through 21?

3. What are the district's strategies for finding children? Does the district use several media?

4. Do the number of children specified within each category seem congruent with expectations?

In addition to these changes, experience had indicated a need for the analysis of some very important administrative factors. A section of Administrative Factors was added to include:

A. Special education budgeting for:

1. comprehensive planning

2. multiple funding sources

3. state level administrative units

4. use of PL 94-142 in consonance with other monies

B. Special problems dealing with small numbers of handicapped children as seen by:

1. consolidation history

2. experience with cooperative arrangement

3. alternate budgeting strategies (regional services, direct contrasting, private and commercial agencies)

4. child find procedures

C. Facilities to include:

1. enrollment trends and use of existing buildings

2. conversion of existing buildings, etc.

D. Staffing characteristics in regard to:

1. excessive turnover

2. low salary schedules

3. social opportunities

4. experience of staff

5. work load

6. role characteristics of administrative and supervisory staff

The above changes were incorporated in the revised data collection instruments in Appendix A. The reader will also note a focus on the four major components of PL 94-142--Least Restrictive Environment, Individual Education Plans, procedural safeguards, and parental participation. (Appendix B relates items on each questionnaire addressing each of these four dimensions.)

Data Collection

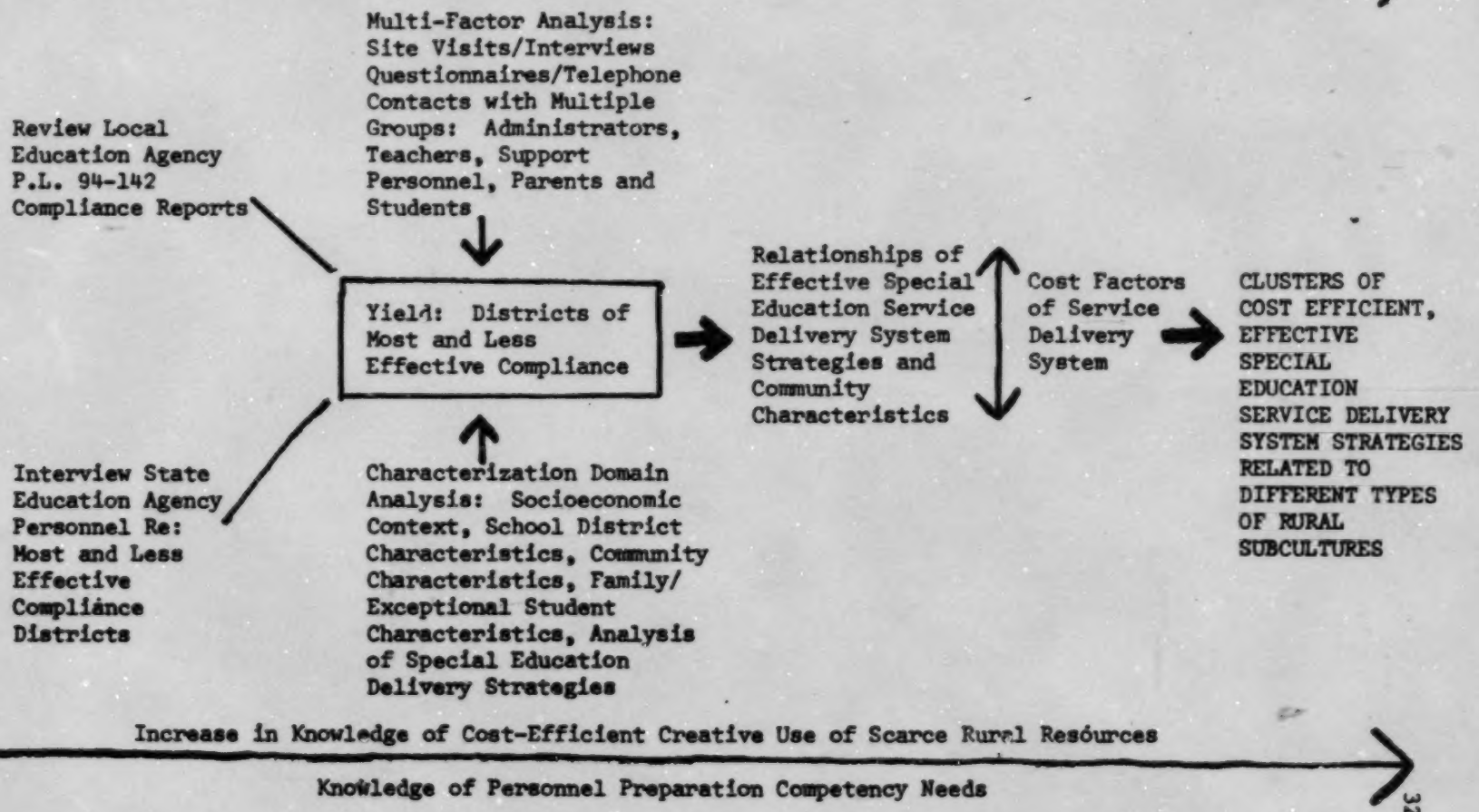
Two major methods have been and are being used to obtain the information for the project: (1) SEA and LEA site visits to collect questionnaire

information, interview selected district and advocacy personnel, and obtain lists of special education consumers; and (2) telephone interviews to obtain additional information and questionnaire data from state department personnel, district personnel, and special education consumers (exceptional individuals and their families). This process of gathering additional data for verification and implementation has been consistent throughout the project, as illustrated by Figure 2 .

DATA GATHERING PROCESS

Characterization of Rural Special Education Delivery Systems
for Development of Profiles of Effective Service Delivery Strategies
Given Particular School District Characteristics

Data Refinement - Decrease in Bias; Increased Validity


Multi-Factor Analysis: Site Visits/Interviews Questionnaires/Telephone Contacts with Multiple Groups: Administrators, Teachers, Support Personnel, Parents and Students
Review Local Education Agency P.L. 94-142 Compliance Reports
Yield: Districts of Most and Less Effective Compliance
Relationships of Effective Special Education Service Delivery System Strategies and Community Characteristics
Cost Factors of Service Delivery System
CLUSTERS OF COST EFFICIENT, EFFECTIVE SPECIAL EDUCATION SERVICE DELIVERY SYSTEM STRATEGIES RELATED TO DIFFERENT TYPES OF RURAL SUBCULTURES
Interview State Education Agency Personnel Re: Most and Less Effective Compliance Districts
Characterization Domain Analysis: Socioeconomic Context, School District Characteristics, Community Characteristics, Family/ Exceptional Student Characteristics, Analysis of Special Education Delivery Strategies

Increase in Knowledge of Cost-Efficient Creative Use of Scarce Rural Resources

Knowledge of Personnel Preparation Competency Needs

Figure 2

IMPACT

This proposal addresses all types of handicapping conditions, including conditions found to be more prevalent in rural areas (e.g., cultural or secondary handicaps). All BEH priorities are thus addressed and will be impacted upon as the 1979-81 use of data gathered in this project culminates in pre- and in-service training models and experiences related to total special education delivery systems in rural America.

As most unserved and underserved handicapped students are located in rural America, the U.S. Congress has been exhibiting increased interest in rural LEAs. The NRP project has been nationally assessing numbers and types of handicapping conditions in geographically representative school district samples. These data will be available during the spring of 1980. The project has also been ascertaining the numbers and kinds of personnel positions, roles, functions, and competencies needed for regular and special educators, administrators and supportive personnel to cost-efficiently implement PL 94-142. The project is also determining discrepancies between these and BEH categories and position titles specified as needs for personnel preparation for the entire nation. Discrepancies between state education agency certificates, estimates of state personnel needed, and personnel competency needs identified by this project are also being determined.

Due to the acute shortages of special education personnel in rural areas, personnel preparation model development and subsequent training emphasis is being placed on identifying effective innovative personnel

preparation roles which may effectively implement the concept of Least Restrictive Environment in a cost-efficient manner. Effective interdisciplinary positions and roles in which personnel can bridge disciplines, districts, and types of handicaps are being identified through the 1979-81 NRP project (e.g., training principals as crisis teachers, paraprofessionals as tutors, and teaching regular educators to conduct task analyses).

Studies have indicated that personnel in rural areas are not cognizant of alternate strategies for serving children which are more cost-efficient as well as more effective for handicapped students (Helge, 1976). In fact, inservice and preservice in rural areas have been designated by Dr. Jasper Harvey, Director of the Bureau of Education for the Handicapped (BEH) Division of Personnel Preparation as critical areas and inservice as "the biggest problem in rural areas." Training models developed and training conducted during Phase III of the NRP will result in rural personnel having enhanced skills in diagnosing and serving special needs students in a more prompt, cost-efficient manner. Service and therefore child count (based on numbers of served handicapped students) will be a positive outcome of this project which 1978 BEH convened panelists stated will "direct us to change in rural areas" and "form the basis for further training."

The statement of the Director of the BEH Division of Personnel Preparation, Dr. Jasper Harvey, during the 1978 Eastern Project Director's Meeting that appropriate and effective inservice training models for rural areas would positively impact situations such as the 46% attrition rate in rural Northern Idaho districts also relates to the impact of this project Models developed and implemented during this project will enhance "retooling." For example, it is even more critical in rural areas than non-rural that regular teachers feel positively about working with a variety of low-

incidence handicapping conditions in regular class situations. Because this project has encompassed a characterization component, profiles which are being developed will advocate, in some cases, effective methods of changing district characteristics instead of or in addition to changing strategies (e.g., impacting regular teacher attitudes through inservice).

The project has also been gathering attrition and personnel needs data (see instruments in Appendix A). Inservice model and field testing during the spring of 1980 will relate directly to such identified personnel needs (i.e., types, levels and locations, as well as roles and functions).

Identifying, disseminating, and developing training models for effectively implementing PL 94-142 in rural areas may assist in changing attitudes of powerful national groups such as the National Education Association (NEA) which believes PL 94-142 funding is inadequate for rural areas. Building awareness and skills in creatively using rural America's scarce resources will truly create a viable interface between regular and special education and ultimately impact the more than 1.8 million handicapped children living in rural areas.

Ultimate impact of data developed in the 1978-79 Phase I Special Project will include the following specific products:

1. Innovative models of personnel preparation for effective and cost-efficient service delivery to handicapped children in a variety of rural subcultures will be developed and made available to:
   a. universities training personnel for rural areas
   b. the 11,000 rural school districts, and
   c. all state education agencies as they relate to their rural constituencies.
2. A minimum of four LEAs will be involved in regular education inservice activities piloting at least four models of service delivery determined effective as per the

Profiles developed in Phase II. (The number of field-tested models will be dependent upon project funding.)

3. An Institute for Change Agents in Rural Special Education will engage rural leadership personnel and potential leaders from LEAs, SEAs, and university personnel preparation programs as a training and dissemination vehicle.

4. Model project data and Profiles from this project will be demonstrated and made available to create systemic change for improving the education of handicapped children in rural America.

5. Continued collaboration will occur between this National Rural Project and all major groups interested in rural special education.

6. The established Management Information System will be able to regularly disseminate knowledge based on project Profiles and models as well as retrieve literature relevant to specific problems rural LEAs are experiencing. The MIS will also address university and SEA personnel preparation needs.

7. The National Rural Project (NRP) Newsletter, a dissemination and technical assistance document sharing innovative strategies determined by this and other projects and facilitating sharing of problems and solutions among LEAs, will be able to disseminate such data to a population of 18,000. This target population will include most of the 11,000 rural LEAs and most universities interested in rural special education service delivery as well as SEAs, CSPD representatives, etc.

8. The project will relate with the BEH Rural Advocate and Rural Special Education Task Force as requested, to enhance the abilities of rural schools to effectively implement PL 94-142.

9. The National Conference Regarding Personnel Preparation for Rural Service Delivery will be conducted.

10. The National Rural Project will continue other technical assistance and dissemination endeavors including dissemination of a document outlining effective strategies and model programs.

PROJECT ACCOMPLISHMENTS

The National Rural Research Project culminated in the following major accomplishments related to basic project objectives:

1. Selection of effective and less effective LEAs in 19 SEAs as specified in the Methodology chapter.

2. Development of data collection instruments and procedures for use in four LEAs (two upper and two lower functioning) in each of the 19 SEAs.

3. Piloting of data collection instruments and making necessary instrument revisions.

4. Initiation of data collection procedures to determine effective special education service delivery strategies in rural areas.

5. Initiation of data analysis procedures.

6. Sharing useful information with LEA, SEA, and university personnel preparation programs.

7. Providing a basis for development of training models for pre- and in-service programs.

These processes have been enacted through the following basic processes:

1. Comprehensive literature reviews

2. Collaboration with other national projects and organizations concerned with rural special education

3. A computerized Management Information System (MIS)

4. Data collection from educational practitioners.

An explanation of specific accomplishments and processes follows:

A. Comprehensive Literature Reviews

Intensive literature reviews have been conducted and continually updated regarding rural special education delivery system problems and solutions. Additional data have been utilized from the Ohio State University Rural Connection, ERIC Clearinghouse on Rural Education, National Inservice Network, and the Regular Education-Special Education Dissemination Network and past BEH-sponsored rural conferences such as the Southwest Regional Resource Center conferences and the 1976 CID National Conference Providing Technical Assistance and Support to Non-Urban School Systems and Implementing Special Education Programs.

Relevant items were analyzed so that effective strategies and practices could be coded and categorized in a manner consistent with the project's objective to profile strategies within the framework of school district and community subcultures. The literature review also served as a basis for determining what information should be obtained from LEAs across the country to ascertain facilitative and hindering factors for the effective implementation of PL 94-142.

B. Collaboration with Other National Projects and Organizations Concerned with Rural Special Education

Extensive collaboration existed between the National Rural Research Project and the American Association of School Administrators, the Rural/Regional Education Association (R/REA), the National Organization of County and Intermediate School Associations (NOCISA), National Rural Association, National Rural Center, and the Regional Educational Laboratory Network. Such collaboration has resulted in invaluable input for data gathering processes including instrument development and contacts with SEA and LEA personnel, as well as awareness of existing knowledge and literature.

Initial data collection procedures also involved visitations with almost all State Plan Officers of the BEH Division of Assistance to States and several representatives of the BEH Division of Personnel Preparation. Annual plans and program administrative reviews, compliance interview guides, and other BEH compliance forms and processes were reviewed.

C. Computerized Technical Assistance--Management Information System

In response to requests from rural school personnel for access to project information as it becomes available, a computerized Management Information System was designed to store, retrieve, and disseminate knowledge regarding effective staff development and service delivery models to districts. This system presently contains information from 150 journal articles. Each article has been assessed by independent readers regarding its usefulness to educators and different types of rural schools, i.e., various transportation, geographic, communication, attitudinal, and other variables. The following topics may currently be retrieved through the System:

1. Programming

   child find
   identifying or demonstrating needs for services
   program evaluation
   screening
   program accountability
   cultural and ethnic differences
   mainstreaming
   support services
   teacher referral
   existing programs
   writing IEPs
   inservice training
   homebound students in rural settings
   parent training
   residential settings
   community awareness and support

2. Administration

   service delivery models
   personnel recruitment
   retaining personnel

grant writing
interdisciplinary planning
initiation of technical assistance task forces

3. Legal and Funding

determination of fiscal needs
child rights
LEAs
SEAs
funding sources
interpreting the law
tax bases
needs assessment

4. Other

transportation
communication
sparse population

Topics will be increased as data collected during 1979-80 from local districts are anonymously added to this computerized System. Even though literature relating to rural special education is relatively scarce, literature review capacities of the computerized System are continuously updated. Information from data regarding problems and solutions of rural areas acquired from the 19 State Education Agencies which the NRP was involved with during 1978-79 is also programmed into this System. Data are entered on an anonymous basis.

When the system is fully implemented, LEAs requesting information regarding strategies relevant to their particular district and community subculture will be asked to describe relevant data such as geographic and transportation systems, numbers of support personnel, and district and community attitudes.

D. Data Collection from Educational Practitioners

1. Instrument development. The instruments which were developed and field-tested include the following components: (a) State Education Agency questionnaire, (b) separate Local Education Agency and special education cooperative questionnaires for administrators, special educators,

regular educators, supportive services personnel, and parents, and (c) an "Attitude Toward Mainstreaming" scale. The following are brief descriptions of these instruments.

State Education Agency Questionnaire

The State Education Agency instrument was the primary instrument used to obtain data from state special education officials. The purpose of the SEA instrument was to obtain a broad perspective of the state of the art of implementation of PL 9/-142 in rural school districts. State officials were asked to identify factors found in the state which made it difficult to fully implement PL 94-142 in rural school districts. These factors included cultural, geographic and/or climatic conditions, teacher retention, and socioeconomic factors which impact a community or school district's delivery of special education services.

The questionnaire also collected information concerning commonly utilized child find activities, community information programs, examples of innovative practices, problem areas, and special education personnel needs. State officials also provided anecdotal descriptions of their state's rural special education programs.

Each instrument includes questions to ascertain successful strategies of complying with each of the four major aspects of PL 94-142--IEP, LRE, procedural safeguards, and parental participation. All questionnaires are included in Appendix A. Appendix B illustrates numbers of items in each questionnaire related to the four major dimensions of PL 94-142.

Local Education Agency Questionnaires

The Local Education Agency instruments seek more comprehensive and specific information from rural school officials in the following areas:

1. Socioeconomic context of the area
2. Local school characteristics
3. Communicy characteristics
4. Special education strategies utilized by the district
5. School district fiscal data

In addition, school personnel, parents, and community members are asked to complete the Attitude Toward Mainstreaming Scale as a means of measuring the school and community attitudes toward educational change. Parents of handicapped children also complete the Parent/Citizen Survey to provide a way to measure parental involvement.

Data are collected via five questionnaires--administrator, special educator, regular educator, supportive services, and parents.

In addition, cost factors associated with service delivery systems in rural areas are being investigated on four levels. The project Cost Analysis Model may be found in Appendix C.

2. Field-testing. All instruments were field-tested at state and local levels. Representatives of LEAs, SEAs, and institutions of higher education, reacted to drafts of the survey instruments. The reviewers represented eight states and six different federal regions. In addition, the original Local Education Agency Questionnaire was field-tested in one rural district and one cooperative service agency. Modifications were made based on feedback from national, state, and local reactions.

Feedback and reactions were sought and received from persons whose contact with rural schools was national in scope. This category included BEH State Plan Officers, project staff from the BEH-funded National Inservice Network, officials from AASA, and several staff from BEH-REGI projects who are part of the National Inservice Network.

3. State Sampling. The bulk of the project's 1978-79 data collection occurred at the state level. Initial formal contact was made with the states' chief school officers. States contacted for this purpose represented diverse economic and cultural lifestyles and exemplified various geographical and transportation systems. In some cases, informal preliminary contact had been established with the state Director of Special Education or some other state official. However, in all cases where on-site visits occurred, approval was sought from the state chief school officer. (Figure 2 depicts states involved.)

Figure 2. States in which on-site data collection occurred.

Site visits occurred in 14 state education agencies. The 14 states in which on-site data collection occurred represented six of the ten federal regions. Data were collected by mail and/or conferences in five additional states representing two other federal regions. Thus, every federal region except one participated in either preliminary activities or by providing data through site visits or by mail (see Figure 3).

Some states were unable to provide complete data for every item on the SEA survey. For example, most states were unable to accurately describe the attrition rate of rural special educators and unable to differentiate between specific rural and urban personnel needs. The only geographic area of the United States not well represented is the Southwest, which will be more completely represented during the survey of LEAs.

Information collected from the SEA surveys has provided a broad perspective of issues currently affecting rural service delivery systems.

Domains in which state officials report the highest degree of difficulty fall into three main categories: (1) attitudinal variables, (2) staffing problems, and (3) problems based on distance.

LEA data have been collected from three states thus far. LEA data collection will be concluded during the early spring of 1980. LEAs being sampled include districts which are successfully mastering the difficulties unique to rural schools attempting to implement PL 94-142 (approximately 50% of all LEAs sampled) and LEAs having particular difficulty implementing PL 94-142.

E. Provision of Technical Assistance Via the Management Information System, NRP Newsletter, and Presentations to AASA, CEC, Maine State Department of Education Conference, NIN Conferences, and R/REA

Limited degrees of technical assistance have been available to rural schools. Such services will markedly increase as data collection becomes completed and Profiles are developed.

State Participation in the National Rural Project

Federal Region	Instrument Reactors	Site Visits	Data Collected by Mail or at Conferences
Region I	Maine Vermont	Maine New Hampshire Vermont	
Region II			
Region III	West Virginia		
Region IV	Kentucky Tennessee	Kentucky North Carolina Tennessee	
Region V		Illinois Minnesota	
Region VI			Texas
Region VII	Kansas		Kansas
Region VIII	Montana	Colorado Montana Utah Wyoming	
Region IX			Arizona Hawaii Nevada
Region X	Idaho	Alaska Oregon	

Figure 3.

NRP staff will continue to collaborate with national groups and individuals interested in rural special education and will also be able to make relevant data available to the BEH Rural Advocate (project officer) and the BEH Rural Special Education Task Force.

Dissemination of Project Data, Materials and Procedures

Project dissemination was multi-faceted. Many dissemination activities of the National Rural Research Project have been incorporated as ongoing dissemination vehicles of the NRP.

National Rural Research Project staff established contact with several organizations focusing on rural special education or regular education and many individuals directly or indirectly involved in rural special education service delivery. In fact, in many instances, these organizations and individuals participated in reviewing project activities and offered support as well as insight and information.

1. National Inservice Network (NIN)

   Project staff maintained a close relationship with NIN staff and have been of assistance to NIN. Staff have been asked to make a series of presentations to the following conferences, sharing current knowledge regarding staff development in rural areas to NIN project members.
   a. Conference for Project Directors
      Denver, Colorado, Feb., 1979
   b. Conference for New NIN Project Directors
      Washington, D.C., September, 1979
   c. Conference for Continuing Project Directors
      Washington, D.C., September, 1979.

2. Council for Exceptional Children (CEC)

   a. CEC International Convention
      Dallas, Texas, April, 1979
   b. CEC International Convention
      Philadelphia, April, 1980

3. American Association of School Administrators (AASA)

   a. National Winter Convention
      New Orleans, February, 1979

b. National Convention on Curriculum & Instruction
Denver, Colorado, June, 1979

4. Rural/Regional Education Association (R/REA)

a. Dissemination article for Rural/Regional Education News, July-August, 1979 issue
b. R/REA National Conference
Madison, Wisconsin, October, 1979

5. Maine State Department of Education

a. Consultation with CSPD Advisory Committee
b. Keynote for State Department of Education, first statewide CSPD meeting

6. Linkages and Collaboration with Rural Organizations

a. Oregon Small Schools Association
b. Education Commission of the States
Denver, Colorado
c. American Association of School Administrators
d. National Organization of County and Intermediate Schools Association
e. American Indian Special Education Policy Project
f. CEC Policy Options Project (the NRP Project Director is field reader for this project)
g. National Rural Association
h. National Rural Center
i. Rural/Regional Education Association
j. National Education Association
k. Regional Education Laboratory and Resource Centers
l. Interested university personnel

NRP will disseminate profiles, training models, and materials for training teachers, support, leadership, and paraprofessional personnel at the national, state, and local education agency levels and in university personnel preparation programs.

A document will be disseminated outlining profiles and interrelationships of effective and cost-efficient strategies related to rural district and community subcultures. This document will follow a "Users-Adopters" format and will facilitate teacher trainers, state education agencies, and service providers in implementation of PL 94-142 in rural school districts. The document will emphasize local problem solving capacity. The abilities

of LEAs to address and solve their own problems by using scarce and other resources more effectively will be described. Interpretations will be included describing model efforts implemented in their original settings and later in other settings, including the results of such efforts.

Other dissemination efforts will continue to take place by participation in convention programs, journal publications, and displays at educational and other conventions. The project will continue to assist the National Inservice Network inter-project technical assistance and communication efforts. (Such presentations have been based on requests to NIN staff by Network members and have been evaluated very highly.)

Management Information System. The MIS is a computerized network facilitating dissemination and technical assistance to interested personnel preparation programs, LEAs, and SEAs, as well as rural organizations. This network is being designed so that inservice models and profiles may later be disseminated to rural and remote areas by correspondence or through linked computer terminals. Currently available inservice references and knowledge which will later be the basis for profile development (when Phase II is completed) will be available to school personnel in an individualized program learning format.

National Rural Newsletter. The NRP Newsletter is currently being disseminated to 6,000 preparation program personnel at universities, and interested LEAs and SEAs. The Newsletter includes (a) findings of the NRP, (b) descriptions written by project directors and LEA persons across the country of innovative staff development, parent involvement, and other service delivery strategies in rural America, and (c) a question-answer section for LEAs to correspond regarding their particular problems and solutions (see Appendix D). During 1980-81, newsletter circulation will increase to 18,000 (to include the majority of the 11,000 rural schools,

and SEA, CSPD, and IHE personnel interested in rural special education).

As diverse inservice models are developed and field-tested at four geographically representative pilot sites, dissemination will occur as well as staff development on site.

The National Institute for Change Agents in Rural Special Education in 1980 will serve as a dissemination vehicle in the true sense of dissemination/implementation. Leaders and potential leaders in rural special education will receive information from Profiles and models developed by the NRP as well as being given opportunities to disseminate their knowledge and resources.

National meetings of individuals and representatives of organizations (such as those organizations listed above plus the Division of Personnel Preparation and Division of Assistance to State personnel) interested in implementing PL 94-142 in rural areas will serve as dissemination vehicles. The National Meeting Regarding Personnel Preparation for Rural Service Delivery will respond to the BEH position paper currently being developed by the BEH Task Force on Rural Special Education, discuss other issues regarding personnel preparation for rural special education service delivery, and receive information concerning the NRP preparation program models based on developed Profiles. This group will also discuss appropriate matching between identified personnel competency needs and appropriate training processes and trainers for effective personnel preparation models. The BEH Comprehensive System for Personnel Development (CSPD) and methods of establishing effective relationships between pre- and in-service will be a focus of this meeting.

STATE EDUCATION AGENCY DATA REGARDING PROBLEMS IN SPECIAL EDUCATION SERVICE DELIVERY

This chapter outlines problems identified by the 19 SEAs which hinder implementation of PL 94-142 in rural school districts. Tables 1-5 depict major problems and percentages of the 19* states reporting each as a problem. Tables 6 through 13 show the distribution of problems throughout major U.S. geographic areas.

At times, data from the southwest is not depicted in the geographic summary, since data were only available from one southwestern state at the culmination of the 1978-79 Special Project and anonymity could not be assured that state. (Subsequently, an additional southwestern state has been included in the NRP and several LEAs from two southwesten states are included in the 1979-81 NRP.) Each Special Project state was designated a random number for data reporting purposes.

Global Problems Identified

A preponderance of data (94%) indicated that recruiting and retaining qualified staff to educate handicapped children were major problems for rural LEAs. Attendant cultural and geographic factors were emphatic service delivery prohibitors as 88% of all states reported "LEA resistance to change," 72% "suspicion of outside interference," 83% "long distances between schools and services" as prominent problems.

Additionally, a majority of states described other factors closely associated with rural culture, resistance to change, terrain, and fiscal

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*19 SEAs. Data from one state were not complete at the time of printing this report. Thus computational means involved an N of 18.

PROBLEMS IDENTIFIED BY SEAs

N = 19

Type of Problem	Percent of States	Type of Problem	Percent of States
Language Barriers	44%	Migrant Employment	33%
Cultural Differences	*66%	Fishing Employment	11%
Resistance to Change	*88%	Timber Employment	11%
Economic Class Differences	50%	Mining Employment	22%
Marginal Roads	44%	Farm Employment	11%
Water Transportation Required	6%	Difficulty Recruiting Qualified Staff	*94%
Air Transportation Required	22%	Difficulty Retaining Qualified Staff	*94%
Mountainous Areas	61%	Icy, Muddy Roads	*66%
Long Distances Between Schools	*83%	Low Tax Base	*55%
High Unemployment	17%	Suspicion of Outside Interference	*72%
Family Size	6%	High Level of Poverty	11%

* Predominant Problem Area

TABLE 1

A Special Project of the
Bureau of Education for the
Handicapped
Conducted by the Center for
Innovation and Development
Murray State University
Project Director: Doris Helge, Ph.D.
Project Staff: John Boltz, M.S.W.
John Merbler, Ph.D.

ALL REGIONS
N=19

* *

State Education Agency Survey

AQ1. Check any of the following cultural factors which inhibit full local, rural district implementation of the regulations of P. L. 94-142 in your state.

State Identification #	24	35	33	40	02	39	21	10	12	41	29	48	37	06	17	11	43	09	14
Language Barriers	*	x	x	x	x	x	x		x							x			
Cultural Differences	*	x	x	x	x		x		x	x	x	x	x	x		x			
Resistance to Change	*	x	x		x	x	x	x		x	x	x	x	x	x	x	x	x	x
Economic Class Difference	*	x	x							x	x	x	x		x	x		x	

* Sufficient data have not yet been received from state 24 for the purpose of this report. An N of 18 was used for computation of percentages of SEA data.

A Special Project of the
Bureau of Education for the
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Project Director: Doris Helge, Ph.D.
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John Merbler, Ph.D.

ALL REGIONS
N=19

* *

State Education Agency Survey

AQ3. Check any of the following socio-economic factors which inhibit full local, rural district implementation of the regulations of P.L. 94-142 in your state.

State Identification #	24	35	33	40	02	39	21	10	12	41	29	48	37	06	17	11	43	09	14
Low Tax Base	*	x	x		x					x	x		x		x	x	x		x
High Unemployment	*		x								x		x						
Suspicion of State/ Federal Interference	*	x	x		x	x		x		x	x		x	x	x	x	x	x	
Family Size	*		x																
High Level of Poverty	*		x								x								
Migrant Employment	*	x			x	x							x			x		x	
Fishing Employment	*		x										x						
Timber Employment	*		x										x						
Mining Employment	*		x			x		x					x						
Farm Employment	*					x												x	
Difficulty Recruiting Qualified Teachers	*	x	x	x	x	x	x	x		x	x	x	x	x	x	x	x	x	x
Difficulty Retaining Qualified Teachers	*	x	x	x	x	x	x	x		x	x	x	x	x	x	x	x	x	x

* Sufficient data have not been received from state 24 for the purpose of this report. An N of 18 was used for computation of percentages of SEA data.

ALL REGIONS
N=19

A Special Project of the
Bureau of Education for the
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Murray State University
Project Director: Doris Helge, Ph.D.
Project Staff: John Boltz, M.S.W.
John Merbler, Ph.D.

* *

State Education Agency Survey

AQ2. Check any of the following geographic or climatic factors which inhibit full local, rural district implementation of the regulations of P. L. 94-142 in your state.

State Identification #	24	35	33	40	02	39	21	10	12	41	29	48	37	06	17	11	43	09	14
Marginal Roads	*		x	x	x	x	x	x					x			x			
Water Transportation Necessary	*		x																
Air Transportation Necessary	*		x			x		x	x										
Mountainous Areas	*		x	x	x	x		x		x	x	x		x	x				x
Icy, Muddy Roads	*		x	x	x	x		x			x	x	x	x	x	x		x	
Long Distances Between Schools	*	x	x	x	x	x		x	x	x	x	x	x			x	x	x	x

* Sufficient data have not yet been received from state 24 for the purpose of this report. An N of 18 was used for computation of percentages of SEA data.

TABLE 4

A Special Project of the Bureau of Education for the Handicapped
Conducted by the Center for Innovation and Development
Murray State University
Project Director: Doris Helge, M.D.
Project Staff: John Boltz, M.S.W.
John Merbler, M.D.

NORTHWEST REGION
N=7

* *

State Education Agency Survey

AQ1. Check any of the following cultural factors which inhibit full local, rural district implementation of the regulations of P.L. 94-142 in your state.

State Identification #	33	40	02	36	21	10	12
Language barriers	X	X	X	X	X		X
Cultural differences	X	X	X		X		X
Resistance to change	X		X	X	X	X	
Economic class differences	X						
Other (specify)							

AQ2. Check any of the following geographic or climatic factors which inhibit full local, rural district implementation of the regulations of P.L. 94-142 in your state.

State Identification #	33	40	02	36	21	10	12
Marginal roads	X	X	X	X	X	X	
Water transportation only (no bridges)	X						
Air transportation necessary	X			X		X	X
Mountainous areas	X	X	X	X		X	
Icy, muddy roads	X	X	X	X		X	
Long distance between schools	X	X	X	X		X	X
Other (specify)							

TABLE 5

AQ3. Check any of the following socio-economic factors which inhibit full local, rural district implementation of the regulations of P.L. 94-142 in your state.

NORTHWEST REGION
N=7

State Identification #	33	40	02	39	21	10	12	
Low tax base			X					
High unemployment	X							
Suspicion of state federal interference	X		X	X		X		
Family size (e.g. older child stays home to care for younger kids)	X							
High level of poverty	X							
Migrant employment			X	X				
Fishing employment	X							
Timber employment	X							
Mining employment	X			X		X		
Farm employment				X				
Difficulty recruiting qualified teachers	X	X	X	X	X	X		
Difficulty retaining qualified teachers	X	X	X	X	X	X		
Other (specify)								

AQ4. List and describe rural areas, regions, and/or districts in the state which are representative of divergent economic lifestyles. e.g. wealthy Kentucky horsefarm areas as opposed to Appalachian mining regions.

AQ5. Please check any of the following child find activities which local, rural districts have utilized effectively.

Door to door census

T.V. announcements

Radio announcements

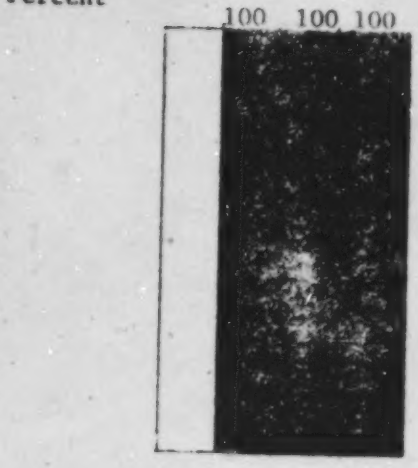
Newspaper announcements

Public health screening

REGION Southeast
N = 3

56

Percent of Surveyed States Reporting Cultural Inhibiting Factors



Percent of Surveyed States Reporting Geographic or Climatic Inhibiting Factors

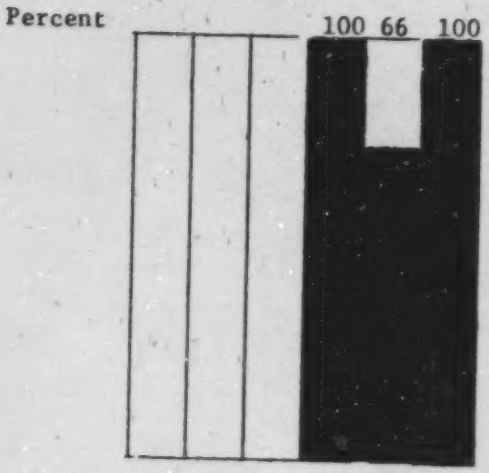


TABLE 6

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REGION Southeast
N = 3

57

Percent of Surveyed States Reporting
Socio-economic Inhibiting Factors

TABLE 7

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REGION Northwest
N = 7

58

Percent of Surveyed States
Reporting Cultural Inhibiting
Factors

Percent

86 71 81 14

Language Barriers
Cultural Differences
Resistance to Change
Economic Class

Percent of Surveyed States Reporting
Geographic or Climatic Inhibiting
Factors

Percent

71 14 57 71 71 86

Marginal Roads
Water Transportation
Air Transportation
Mountainous Areas
Icy, Muddy Roads
Long Distances

TABLE 8

70

71

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REGION Northwest
N = 7

59

Percent of Surveyed States Reporting
Socio-economic Inhibiting Factors

TABLE 9

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72

73

REGION Middle America
N = 4

60

Percent of Surveyed States
Reporting Cultural Inhibiting
Factors

Percent of Surveyed States Reporting
Geographic or Climatic Inhibiting
Factors

TABLE 10

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REGION Middle America
N = 4

61

Percent of Surveyed States Reporting
Socio-economic Inhibiting Factors

TABLE 11

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76

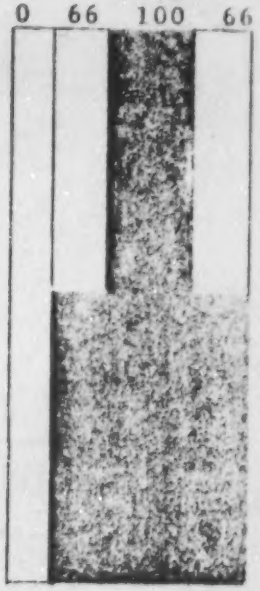
77

REGION Northeast
N = 3

62

Percent of Surveyed States
Reporting Cultural Inhibiting
Factors

Percent



Language Barriers
Cultural Differences
Distance to Change
Economic Class

Percent of Surveyed States Reporting
Geographic or Climatic Inhibiting
Factors

Marginal Roads
Winter Transportation
Air Transportation
Mountainous Areas
Muddy Roads
Long Distances

TABLE 12

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48

49

REGION Northeast
N = 3

63

Percent of Surveyed States Reporting
Socio-economic Inhibiting Factors

TABLE 13

BEST COPY AVAILABLE

80

81

problems. For example, "icy, muddy roads" (66%), "mountainous areas" (61%), "cultural differences" (66%), and "low tax bases" (55%).

Clearly, rural cultural factors such as conservatism and suspicion of outside interference combined with long distances to travel under adverse circumstances create serious problems in recruiting and retaining qualified personnel. Sparse populations and resistance to change exacerbate rural human service delivery systems. Poverty and low tax bases even further inhibit full service delivery to handicapped students--particularly culturally different special needs students, even though geographic variations of this thrust exist (see Tables 6-13).

Specific Problem Areas Reported

The remainder of this chapter will describe significant data collected related to major dimensions of the SEA questionnaire.

A. Cultural Factors

1. Language Barriers. Eight states (44%) reported that language differences among population subcultures hindered implementation of PL 94-142. This item was checked by six of the seven states surveyed in the northwest and by one in both the southwest and mid-America region. Surprisingly, even though culturally different groups with diverse languages exist in the northeast and southeast, this item was not reported to be a problem by any of the states surveyed in these regions.

Language differences had greatest impacts in the capacity of local districts to obtain assessment personnel able to speak the appropriate language. It also affected the quality of interaction between the school and the parents of the handicapped students.

2. Cultural Differences. Sixty-six percent of the states reported that cultural differences placed barriers in local school districts

abilities to fully implement PL 94-142. Although this problem was identified across regions, it was found in only one state in the mid-American region (where populations tend to be more homogeneous).

Degrees of difficulty in responding to cultural differences were found to vary considerably. State 40 in the northwest region, for example, had several pockets of a population subculture which tend to be a communally organized system and decisions tend to be made on a community basis. In such communities it was often necessary for educational personnel to deal with a large portion of the entire community in order to explain and implement appropriate special education programs. As the population does not use electronic equipment, educational programs are unable to use "typical" audiovisual instructional equipment.

Another variation on the impact of cultural differences was the fact that many cultures do not place the same value on education as the majority population does. Consequently, it was much more difficult for school districts to identify and plan for children in such cultures.

As many handicapped children were able to perform acceptable and productive roles in their subculture without the benefit of special education programs, they were not perceived as "handicapped" by their culture. However, as they were mainstreamed into the larger society, they often faced seemingly insurmountable barriers.

Generally the presence of culturally different populations made it difficult to hire staff who possessed the minority language and were sensitive to the needs and nature of the subculture.

3. Resistance to Change. Resistance to change was reported a major inhibitor by 16 of the 19 SEAs (88%) queried. This problem was identified by all states except two from the northwest.

Clearly, residents of rural areas value tradition. In addition, SEA personnel reported a general suspicion of "innovations" and a reluctance to change practices without clear demonstrations that a change would in fact be better than what existed.

SEA descriptions of this trait in practice ranged from attitudinal problems with school administrators toward Least Restrictive Environment concepts to a general hesitancy in the community to adopt changes which were perceived as imposed by external forces (e.g., PL 94-142). In some states it was reported that local districts had refused flow-through funds rather than adjust programs to meet the requirements of PL 94-142 and Section 504 of the 1975 Amendments to the 1973 Vocational Rehabilitation Act.

This "Management by Tradition" approach has serious ramifications for potential system alterations. For example, severely handicapped students in rural areas have been served in out-of-district programs. Attempts to serve these students in local schools are usually met with cries that they cannot be served as well in the local district. Interviewers felt that this reflected feelings of inadequacy of school staff previously told they could not effectively serve such children.

The total gamut of school board members, school administrators and educational staff, and parents were reported to exhibit resistance to change. As traditional decision-making, values, and operations were perceived as having been established in the best interest of the children, efforts to alter these processes were consequently met with a great deal of resistance.

4. Economic Class Differences. Nine of the SEAs (50) reported that economic class differences placed some degree of restriction on rural school abilities to fully implement PL 94-142. This problem was distributed

across all regions. Although the importance of the problem varied from one region to another, in the southeast, all states identified this problem, whereas only one of eight states in the northwest indicated it was a problematic factor.

The predominant factor initiated was economic class differences regarding values placed upon educating handicapped students. It was reported that some LEA cultures did not favor expenditures for individuals whom they did not feel would be productive in the long term. An additional mitigating factor was the existence of parents of handicapped children in marginal economic statuses who had more immediate subsistence concerns than the education of their children. As a result, many LEA personnel were reportedly frustrated by these parents who would or could not pay the same degree of attention to their children's educational program as do parents in higher income groups.

In spite of the fact that this problem was identified by nearly half of the states, SEA officials generally did not believe this item affected large numbers of children. However, they did feel that this information should be considered when developing community information forums and outreach programs. For example, common by-products of economic class differences were reported to be difficulty generating sufficient local program support and reluctance by some parents to identify their handicapped children as needing services.

B. Geographic and Climatic Inhibiting Factors

1. Alternate Transportation Modes. The necessity of using water and air transportation modes for special education service delivery was checked by 6% (water transportation) and 22% (air transportation) of all LEAs. In all cases the states were in the northwest region. In most

instances, alternate transportation was utilized to transport students to centers for assessment and evaluation procedures. It was reported as being rare that such transportation was used to maintain a handicapped child in an ongoing program.

2. Marginal Roads. Marginal roads were seen as contributing more serious problems to providing fully educational services to handicapped children by 44% of all SEAs. Although inadequate roads were not reported as major problems in the southeast or southwest, they were identified as major problem in the northwest and problematic to a lesser degree in the northeast and mid-America regions.

In many instances, the impact directly affected itinerant staff more than handicapped children. Poor road conditions add to the travel time required to move from one assignment to another. Consequently, units of actual service cost more under such conditions than in areas where roads are not as obstreperous.

3. Mountainous Areas; Icy, Muddy Roads. Sixty-one percent of all 19 SEAs reported that mountainous areas negatively affected full service delivery. Sixty-six percent indicated that icy, muddy roads negatively impacted full service. Icy, muddy roads and problems caused by mountainous areas were present in all regions except the southwest.

As with marginal roads, these factors contributed to higher costs per unit of service. In addition, they were directly responsible in many instances for disrupting continuity of (already inadequate) services and contributing to long delays in delivery of assessment and evaluation procedures.

State 33 in the northwest, for example, reported frequent instances in which staff were unable to travel for several days during the school

year due to inclement weather. This not only proved costly but reduced the amount of time available to other service delivery sites.

State 40 in the northwest reported instances such as a mountain slide which blocked a road for two months and then added 300 miles on to the distance required to obtain special education services.

Although these conditions negatively impacted total educational systems in these areas, special education services were more severely affected, especially when services were provided out of district or on an itinerant basis.

4. Long Distances Between Schools and Services. By far the most serious problem in this cluster identified by SEAs is the prevalence of long distances between rural schools and special education services. Fourteen states (79%) reported this as a critical factor. This problem was compounded in schools with insufficient numbers of handicapped students to financially justify employing full time special education staff or consultants. SEA reported that service delivery currently involves either long bus rides for handicapped students or an unusual amount of traveling time by itinerant specialists. The first alternative in practice has serious implications in light of the Least Restrictive Environment requirement of PL 94-142, and use of the second alternative raises questions in many instances concerning the appropriateness of sporadically delivered services.

No state reported completely satisfactory solutions to such problems. Some rural schools had utilized paraprofessionals to implement programs developed and supervised by certified staff. However, state officials in many cases voiced serious concern about the adequacy of such services because of the level of paraprofessional training and the lack of meaningful

regular supervision. Also, the salaries received by paraprofessionals in many instances were not sufficient to attract persons well suited to make the ideal commitments to handicapped students.

C. Socioeconomic Factors

1. Low Tax Base. Ten SEAs (55%) reported that low tax base bases had some impact on rural district abilities to deliver full services. Inequities in state tax laws, school financing, and distribution of funds were reportedly present. These problems were distributed across all regions. In some states it was felt this would be corrected in the near future, as deficiencies in state funding formulae were being corrected. In other instances, rapid growth in population because of frequent transient industrial development made it difficult for local districts to fund programs.

The 1979-81 NRP will need to obtain more LEA data to determine whether this item is of significant impact in implementing full special education service. It is possible that the "tax revolt attitude" currently prevalent in the United States is a greater contributor to inadequate funding than the tax base itself.

2. High Unemployment. High levels of unemployment were reported to be a hindering factor by one state in each of the northeast, northwest, and southeast regions. The NRP will need to gather specific information to ascertain how unemployment directly impacts full service.

3. Suspicion of External (Federal and State) Interference. Suspicion of "outside interference" was identified as a major problem in all regions. Seventy-two percent of all SEAs surveyed reported that this attitude contributed to difficulties in implementing PL 94-142. In the northeast, people reportedly have long exhibited pride in self-sufficiency.

In the west, strong feelings of resentment toward federal bureaucracy prevail. In fact, western states are becoming increasingly upset over federal ownership of large amounts of their land and the regulations concerning land use. In some areas of the northeast, local districts have refused flow-through funds in order to avoid federal monitoring. It was reported that in spite of this fact, LEAs are meeting legislative requirements.

Suspicion of external interference is closely related to the earlier reported item, resistance to change. Many rural areas are proud of their traditions and perceive mandated changes as threats to their ability to control their own destiny. It was reported that such suspicions are sometimes more strongly held by school officials and board members than general rural citizens. Ironically, in this instance, externally mandated changes should include more active participation should include more active participation by parents and community groups in the development of educational services for handicapped children. However, some SEAs reported difficulties appropriately increasing their monitoring roles as per PL 94-142 because of suspicion regarding external mandates.

4. Family Size. This item was noted by one state in the northeast as causing problems for some school districts attempting to implement PL 94-142. State officials in State 33 indicated that in some large families older children, some of whom are handicapped, stay home to care for younger siblings. This factor does not seem to be of major importance to any of the other states.

5. High Levels of Poverty. One state in the southeast and one in the northwest (11%) reported that poverty affected delivering full service to some handicapped children in rural areas. In these two cases,

it was a matter of older, handicapped children remaining out of school to assist the family in maintaining a subsistence level. State officials believed this effect could be reduced through better coordination of human service agencies.

6. Migrant Employment. Six SEAs (33%) in four of the five regions reported that migrant employment inhibits rural schools' ability to deliver full service. While states have taken measures to account for migrant children and although one state reported that PL 94-142 has forced SEAs and LEAs to be more generally accountable in serving handicapped migrant children, the six states indicated that considerable difficulties exist in tracking migrant children for service delivery as they move from site to site. Program continuity is a serious problem.

Efforts to cope with this have included close cooperation between divisions of special education and divisions of migrant and bilingual education.

In some western states, heavy development of energy resources has resulted in temporary influxes of workers. This has placed acute demands on LEAs for service delivery. School districts have been reluctant to seek new funds for programs which may not be necessary in the future. Consequently, services in some such areas are far less than adequate. Contracted services, where appropriate, has been the most feasible solution in such instances.

7. Fishing and Timber Employment. Both fishing and timber employment were identified as problematic by one state from the northwest and one from the northeast. These states did not describe this factor as their most serious problem but one which did have a bearing on a limited number of students at certain times of the year.

It was reported that "when the fish are running" or roads are open to more timber, numbers of students--handicapped or not--will assist their

parents at these peak times. Althouth their intent was reported as an effort to assist their family rather than to purposefully avoid school, problems were created for programming for handicapped students.

8. Mining Employment. Four states (22%)--three from the northwest and one from the northeast, reported mining employment as having negative ramifications for implementing PL 94-142. As the energy crisis has resulted in overwhelming efforts to capitalize on America's natural resources, mining towns have reportedly been created almost overnight.

The result has been large influxes of new, temporary residents in many small communities. Although the districts were responsible for serving new handicapped children, they have had problems hiring staff and funding and initiating programs which they felt would be unnecessary once the energy boom and its start-up operations have leveled off.

9. Farm Employment. Two states (11%)--one from the northwest and one from the mid-America region, indicated that farming employment played a negative role in delivering full service to some rural handicapped students. impact was comparable to that reported above regarding fishing and timber employment as some handicapped students missed school at planting and harvest times in order to assist their families.

D. Difficulty Recruiting and Retaining Qualified Staff

Only one state from the northwest reported no difficulty attracting and retaining qualified staff. Of the states participating in the study, 94% indicated this was a major factor in implementing full services to handicapped children.

Many state officials expressed serious doubts that this problem could be solved without modification of current certification regulations. Social isolation, extreme weather conditions, inadequate housing, and low

salaries create conditions which make it most difficult to employ special education staff in many rural schools. Many positions remain unfilled for months and sometimes for years.

Many rural special education staff who are hired are young and inexperienced. Social and cultural isolation were reported as encouraging most to leave rural schools as soon as openings occur in more urban settings. Some states estimated an annual turnover of 30-50% with almost complete turnover every three years. Attrition rates such as these have serious ramifications for personnel development and program stability.

Under these conditions it was reported that personnel development, which is difficult enough in rural areas given a stable personnel force, seldom reached beyond basic orientation to district and state philosophies. Constant turnover renders it virtually impossible to develop and implement long-range plans for staff improvement. High attrition was reported to necessitate re-initiation of personnel development each year or every two years.

E. Child Find Activities

Most states reported that the following child find activities had been utilized in varying degrees by local districts:

Door-to-door census
TV announcements
Radio announcements
Newspaper announcements
Public health screening
Physician referral
Preschool screening

Because of the close-knit communities in rural areas, state officials believed such communities have less child find problems than urban areas.

The most frequently reported concern related to child find was reluctance by parents to acknowledge that a child was handicapped.

F. Other Difficulties Reported in Implementing PL 94-142 in Rural Areas

The most frequently mentioned additional area of implementation was provision of a continuum of services for implementation of concepts, IEP development, and insuring parental involvement and procedural safeguards. These aspects relate directly to all four major dimensions of PL 94-142; hence, once again it becomes excruciatingly clear that rural LEAs are experiencing considerable problems in implementing PL 94-142 effectively.

Difficulty implementing Least Restrictive Environment requirements in rural schools can be due to paradoxes of problems encountered in urban schools. Rural schools typically have served mildly handicapped children in regular classroom settings due to lack of segregated settings. In most instances the major problem in doing so was lack of consistent itinerant and resource help. However, programs for moderately and severely handicapped children were not commonly found in rural schools. The traditional pattern has been to place such students in state or regional facilities.

Concerted emphasis on returning many of these children to their homes has often highlighted an abyss of local services. Part of the problem has been related to school and community attitudes. Parents have grown comfortable with their children being placed outside the home, and school boards and administrators have been fearful that local schools cannot provide appropriate services. To adequately serve a population which has previously been served elsewhere requires additional staff trained to meet specific needs and/or additional training to upgrade the skills of existing staff.

In addition, although PL 94-142 specifically states that IEPs are to be developed by an interdisciplinary committee, many rural districts are

currently assigning this responsibility to the special education teacher(s) in the district or to a district counselor; and professional placement decisions are frequently "rubber stamped" by parents. This not only inhibits the effectiveness of the education of the child but impacts attitudes in a negative way regarding the "burden" of special education.

Most rural areas do not have local chapters of such organizations as Association for Retarded Citizens (ARC), Association for Children with Learning Disabilities (ACLD), etc. Although most rural schools have provided for parental participation to meet the requirements of PL 94-142, state officials commonly pointed out that parental involvement in rural areas lacks meaningful advocacy aspects (the intent of PL 94-142).

Typical perceptions of schools by rural parents have been that school personnel are the experts and know what is best for students. Thus, they have tended to play a passive role in the educational process including IEP development meetings. Many parents of handicapped students have been inclined to be most agreeable to any kind of service provided for their children whether appropriate or not.

Some state agencies have developed and implemented parent training programs coordinated on a regional basis. Local schools were reported to be reluctant to enter into this arena because of fear that lawsuits and hearings will interfere with their general school operation. Emphasis on potential positive outcomes including effective parent/school partnerships have not been perceived.

Some state officials reported that serious efforts need to occur to ensure that procedural safeguard requirements are in policy and in practice. Many rural schools have operated on an extremely informal basis with record keeping and disciplinary measures. Additional inservice and assistance in procedural safeguard requirements was reported as a critical need.

Summary of SEA Data

Without exception, all states surveyed were making serious and good-faith attempts to assist rural school districts develop and implement programs for handicapped children. SEA officials were encouraged by their internal studies of LEA accomplishments since 1975, although cognizant of the many challenges yet to be mastered.

There is no question that the greatest obstacles to full, appropriate service for handicapped rural students are difficulties in recruiting and retaining qualified staff and in providing appropriate inservice on a continuous basis.

These problems exist in tradition-bound rural environments, and are exacerbated by geographic and climatic demands of rural, remote and isolated areas. Attitudinal problems clearly hindered service delivery in some cases, and often prolonged the period of time required to make programmatic changes. However, state officials were not only aware of and working on these problems but appeared to be open to assistance and suggestions for solutions.

Limitations of the Study

Participation of SEAs and LEAs with the 1978-79 National Rural Research Project and the 1979-81 National Rural Project has been voluntary. This creates the possibility of sample bias in the study. Budgetary limitations also made it impossible for more than 38% (19) of all SEAs to participate. While project staff are reasonably sure that participating SEAs have been frank in delineating their problems, they are in no position to judge the status of special education in states which were not participants.

Efforts were made by the project to include a valid sample of all major economic, geographic and cultural lifestyles in the 50 states of the

United States. However, as non-participating states may vary in terms of their educational practices and procedures, caution must be exercised in assuming that data reported in this document are accurate reflections of special education practices and problems in states which were not surveyed.

The primary source of data at the SEA level was usually the State Director of Special Education. However, in some instances, subordinates provided some of the requested information. Consequently, sources of information did vary somewhat, and interviewees differed not only in roles but in length of time and experience in state employment and residence. At this point, it is difficult to determine to what extent, if any, differences in such information sources impacted the data.

As the 1979-81 National Rural Project gathers data in examples of upper and lower functioning LEAs in 19 states, checks are being made to validate that the LEAs being surveyed do indeed represent districts with particular successes and difficulties implementing PL 94-142. The intent of this process is not, of course, to monitor LEA compliances or SEA levels of monitoring success but rather to ensure that each LEA survey does, in fact, fall into the category for which it was recommended.

USING INHERENT RURAL ATTRIBUTES AS RESOURCES-- EFFECTIVE STRATEGIES IDENTIFIED VIA PRELIMINARY LEA SAMPLING

Introduction

One of the major objectives of the 1979-81 National Rural Project (NRP) is to identify effective LEA strategies of implementing PL 94-142 given particular rural district and community subcultures. Profiles are being developed through the NRP for incorporation into personnel preparation models also being developed as part of the project. In addition, Profiles will be made available to SEAs and LEAs interested in identifying a systematic data-base of strategies effective and cost-efficient for individual aspects of their district and community.

The 1978-79 National Rural Research Project accumulated from the study of the 19 SEAs was not designed to comprehensively address the issue of individualized strategies. An intensive study of 80 LEAs will be completed during 1979-80, and profile and personnel preparation model development, field-testing, and dissemination will occur during 1980-81.

This chapter will summarize preliminary LEA data collected during 1978-79 and present non-Profiled data reported by SEA and LEA personnel as helpful in alleviating problems encountered by rural LEAs.

Overview of LEA Problems and Resources as Discerned in Field-Testing, Preliminary Sampling, and Literature Reviews

Field-tests of LEA instruments were conducted in two districts and one cooperative in three separate states. In addition, comprehensive studies were conducted with six districts in two states during 1978-79. Although data were insufficient for meaningful cross-regional analysis or Profile

development purposes, valuable information was obtained.

LEA surveys generally not only confirmed SEA information but enriched data regarding problems, resources and successful strategies. Figure 4 depicts rural environmental problems and resources initially identified as facilitating or inhibiting implementation of PL 94-142 in small school districts. Data for Figure 4 were gathered via project comprehensive literature reviews, SEA questionnaires, LEA field-tests, and initial LEA studies.

Using Inherent Rural Attributes as Resources

The Systems Model of Inputs, Processes, and Outputs may be used functionally (as Churchman recommended in 1968) or dysfunctionally (as depicted in Figure 5). Similarly, although rural school environments inherently possess a number of problems for the education of the handicapped children, there are also many resources unique to non-metropolitan areas. For example, the concept of "community spirit" still lives on in rural America and people sincerely care about one another and are usually willing to do whatever they can to assist others who are in need. In addition, rural districts are typically blessed with a void of bureaucratic barriers to service prevalent in urban schools.

It is fairly well recognized that many positive aspects of rural life may simultaneously function negatively. For example, one key strength of rural areas is the true sense of community and family interdependence with the school. This relevancy and interdependence between home, school, and work can be extremely supportive to handicapped students, facilitating opportunities for mutually sharing school and community resources.

Concomitantly, the personalization of all social, political, and commercial relationships of educators' lives (Gjelten, 1978) makes school

Inherent Attributes or Problems	Inherent Rural Resources
Resistance to and fear of change "Management by Tradition"	Close ties between home and community
Many specialized services cost more per unit of service	Limited population and similar backgrounds culminate in feelings of community ownership of schools--people interested in "their" schools
Less available specialized professional expertise and services	Closeness of the community--true "sense of community" relationships
Geographic distances betwen schools, families, and supportive resources are isolating in terms of regular school activities as well as technical assistance	Social ties involved in voluntary organizations and churches which schools can use
Physical isolation caused by bad weather (small roads closed by snow, storms), etc.	Public Law 94-142 and Section 504 mandates--resources for change
Limited viewpoints facilitated by extensive family relationships, nepotism, etc.	Political leaders responsive to groups of familiar citizens
Small political base; less knowledge of basic rights	Efficiency of community grapevines
Transportation (lack of, cost of, etc.)	More accountability is possible through personal relationships and effective grapevines to almost everyone
Communication (only 76% of most rural populations have phones)	"Theory Y" trust relationships
Isolation from professional stimuli, materials, etc.	Philosophy of independence
Information and social isolation (many rural adults do not read newspapers or watch newscasts)	Active civic clubs available for utilization
Lack of awareness of available outreach or other services for handicapped students	News media willingness to provide excellent regional coverage
Physical facilities limited, such as wheelchair ramps	Higher percentage of retired/older people are potential school resources
Shortage of instructional materials and media	Often "virgin territory" for change
	Lack of bureaucratic barriers to service

Figure 4. Identified Problems and Resources in Implementing PL 94-142 in Rural School Districts.

Inherent Attributes or Problems	Inherent Rural Resources
Limited numbers of people result in reduced staff, limited prevalence of some handicaps, etc.	Long-standing requirements that rural communities solve many of their own problems
Low general educational standards (only 54% of rural schools are generally accredited)	School-community interdependence and extensive personal relationships facilitate volunteerism
Limited education and experience levels of adult population; attendant role modeling	Community members' needs to develop independent "generalist skills" can be functional for schools
Limited tax base (lower tax rates)	Personal climate of school lends itself to truly individualized instruction and sound home-based programs. Teachers are expected to maintain close relationships with students and community
More dependent groups in existing rural areas (senior citizens and disabled individuals)	Communities typically independent, yet a strong sense of cooperation exists (often from necessity)
Lower teacher salaries--lower teacher quality	
Lower per pupil expenditures in rural districts	
Less interest and/or expertise in securing money in rural than in urban districts	
Higher than average drop-out rates, particularly among handicapped students	
Isolated and extensive family and social relationships facilitate hiring practices often more attuned to personal relationships than competence	
Distrust of "outsiders" and outside expertise	
Limited economic structrue, restricted types and numbers of jobs	
Lack of knowledge of parent and student rights	
Lack of awareness of alternate cost-effective personnel roles (e.g., consultant, itinerant, diagnostic-prescriptive, or resource room teacher; paraprofessional and community assistants)	

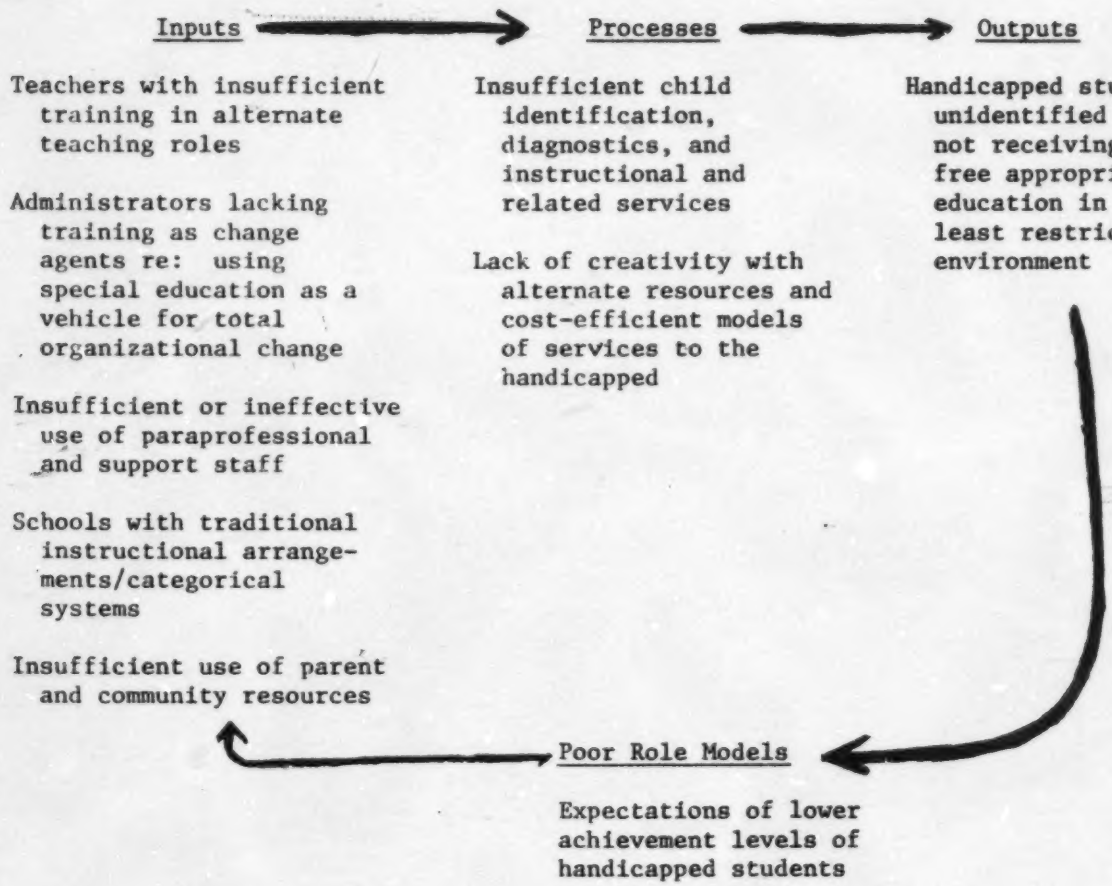
Inputs
Processes
Outputs
Teachers with insufficient training in alternate teaching roles
Administrators lacking training as change agents re: using special education as a vehicle for total organizational change
Insufficient or ineffective use of paraprofessional and support staff
Schools with traditional instructional arrangements/categorical systems
Insufficient use of parent and community resources
Insufficient child identification, diagnostics, and instructional and related services
Lack of creativity with alternate resources and cost-efficient models of services to the handicapped
Handicapped students unidentified or not receiving a free appropriate education in the least restrictive environment
Poor Role Models
Expectations of lower achievement levels of handicapped students

Figure 5. Dysfunctional Systems

personnel feel vulnerable. Without effective, continuous staff development, including stress reduction, a relatively high rate of "teacher burn-out" may result as rural staff are asked to be "all things to all people" (Helge, 1977).

This project asserts that the most effective problem-solving techniques will use the resources represented in Figure to the maximum extent appropriate. In practice, this will mean not only trying to overcome negative aspects of living in small communities but also attempting to convert negatives into positives whenever possible. For example, many of the "hindering factors" such as greater numbers of older/retired persons who are not heavy contributors to the tax base, can and have been in various parts of the nation, excellent sources of specialized or nonprofessional manpower. Additionally, retired individuals often have sufficient stature to effect community support for a program in which they are involved or influence negative feelings about school programs of which they have little understanding.

The following are examples of strategies which can be or have been found to optimally exploit inherent resources of rural communities and to convert adverse circumstances into assets, whenever possible. The reader will easily relate many of the strategies to the problems and resources listed in Figure 4 .

Strategies and Promising Practices (Non-Profiled)

I. Strategies to Overcome Resistance to Change

A. Understanding the Ripple Effect

The most successful efforts to counter resistance to change and suspicion of external interference were centered around frequent informational and participatory training sessions. PL 94-142 was presented in a

straightforward fashion in these conferences, and school and community participants were invited to help develop local implementation options.

Rural administrators need to be aware of the values of change and particularly externally mandated change (McClelland, 1969; Silberman, 1970; Bennis, 1971) such as that mandated by PL 94-142 and Section 504 of the 1973 Vocational Rehabilitation Act. Motivation (M) for systemic change and growth is composed of discomfort (D) with the status quo and realistic hope (RH) for positive change (M = D + RH). Modified expectations created by mandated change facilitate such a growth environment for positive or negative attitudes and behavior. The uncertainty, fear, and anticipation (D) stimulated by mandated change may be used for best advantage to the entire school (M) if personnel begin to understand true potential (RH) for long-term systemic benefits.

Investigators have discerned that advantageous changes in special education components of a system such as precision teaching and individualized instruction will have and have had positive impact on other components of the system. Yoshida (1977) characterized such a phenomenon as the "Ripple Effect," describing the initial impact as a ripple. This ripple "appears to maintain consistency but actually changes characteristics as successive waves are measured at various distances from the origin" (pp. 14-15). The effects of impact (mandated changes in special education) become more distinct the further one observes from the point of origin. For instance, Dr. Ed Martin, Associate Commissioner of the Bureau of Education for the Handicapped, and Ken Bierly (1978) discerned that IEPs effectively implemented for special needs children also benefit nonhandicapped children.

Some rural administrators have begun to understand that many special education innovations may be infused into the total educational

system. For example, adoption of itinerant, paraprofessional assistance, consultant, diagnostic, prescriptive, or other alternate teaching models would be expected to benefit the total school system in cost-efficiency as well as the student (based on Dunn's well-known treatise of 1968). Infusions of special education philosophies and methodologies such as individualized instruction, task analysis, etc. may be planned and expected to have positive school-wide impact.

B. Employing Attitude Change Techniques

Districts should engage formally and informally in self-awareness and attitude change exercises with staff implementing PL 94-142 and Section 504. Even in small districts with scarce professional resources most professionals are somewhat competent in what they do; they are simply unsure of their roles and responsibilities with regard to new special education mandates.

It has been well researched that attitudes should be addressed on emotionally-charged issues such as the requirements of PL 94-142. Potentially 80% of all behavior is attitudinally based. Acceptance has been found to be the first step toward new behavior such as is required for effective implementation of PL 94-142 (and not just compliance to the letter of the law). Teachers, like other members of organizations, want acceptance, affection, and belief in their growth and esteem (Bennis, 1971). Many aspects of PL 94-142 mandates such as collaborative planning can create mutual respect among support professionals such as psychologists, social workers, therapists, and administrators. As teacher skills have generally not been adequately recognized in such processes (Torres, 1977), this can enhance total organizational development.

Bierly (1978), in a study of teacher reactions to mandated IEP involvement, discovered an initial preponderance of negative attitudes toward

involvement in the IEP process (and other requirements of PL 94-142) but increasingly positive attitudes after consideration of the affective domain and after increasing experience with actual implementation of PL 94-142 mandates. Effective staff development and organization development activities have planned use of the natural phenomenon, cognitive dissonance. For example, mandating an experience which is a change in a teacher's behavior (e.g., participation in development of an IEP) increased understanding of the concept (the child's needs upon which the IEP was based) and changed the teacher's attitude toward that new behavior. Most school personnel develop enhanced attitudes toward working with special needs students when that was a part of their personal behavioral repertoire.

C. Using Mandates as Resources for Total (Systemic) School Change

Mandated special education procedures such as development of the IEP have been used as opportunities for integrating the efforts of regular and special educators toward a common cause. IEP meetings have been effectively used as vehicles for formal and informal inservice. The formal, mandated process of sharing information increased the amount of essential information available to all teachers working with a particular student.

To reinforce the above phenomenon and to increase positive attitudes, interest, relevant portions of the inservice for regular teachers have at times focused on techniques effective with nonhandicapped students as well as students with mild and moderate handicaps. For example, systematic instructions, such as Task Analysis combined with daily lesson plans and Applied Behavioral Analysis could and should be used with all students (Haring, 1974).

Informally, such mandated interaction had been an inservice process in itself. This was particularly true when staff with widely diverse responsibilities meet, such as secondary educators from different disciplines or a self-contained special educator or resource room teacher meeting with a regular classroom teacher to plan an IEP. Some of the benefits of using mandated meetings as informal inservice opportunities are described below:

1. Hidden conflicts surface, creating opportunities for the structured group and relevant others to engage in conflict resolution.

2. Increased communication among school personnel and parents in different roles enhanced understanding of varying roles and perspectives. This is particularly true after covert conflicts surface and are dealt with.

3. Mutual understanding and respect is developed for various disciplines.

4. Interdisciplinary teamwork is carried beyond required interactions (the Ripple Effect is activated).

5. Behavior management and other techniques discussed and implemented because of mandated IEPs tend to be successfully used with "normal" children just as individualized instruction and precision teaching tended to be successfully generalized to nonhandicapped children frequently during the early 1970's.

II. Strategies to Identify and Utilize "Hidden" Resources to Overcome Problems of Scarcity

A. Training Personnel to Fill Multiple Roles

Locating and training mobile individuals within a district such as a principal, counselor, or secretary has proven to be an effective practice. This also facilitated understanding and commitment to school goals for special needs students these personnel assist. Via the efficiency of rural grapevines, this understanding and commitment was carried to other school personnel.

If the district was fortunate enough to have one or more teacher consultants, another successful practice was having those individuals train peers to help instruct handicapped children. This enhanced their scope of operations. Administrators are urged to consider differential use of personnel within the school building, using identified educational needs as the catalyst to vary roles and functions of staffing and programs. Some examples include:

1. Using the resource teacher (or the principal in a smaller system) as a crisis teacher, especially with students who identify positively with that person.
2. Exchanging the speech therapist and the drama teacher for a short period of time.
3. Assigning a mathematics teacher as a recorder for precision teaching approaches.

B. Using Cost-Efficient Service Delivery Models

Using cost-efficient models of service delivery such as consulting, itinerant, diagnostic-prescriptive, crisis, and resource teacher models has also proven effective. Cooperatives, or combinations of two or more districts administratively linked to facilitate delivery of identified service needs, also used scarce resources efficiently. Districts were encouraged to give adequate consideration to: (1) the true purposes of the cooperative, (2) relationships between the cooperative and each district in regular as well as special education matters, and (3) lines of accountability of all personnel hired by the cooperative to each district.

It has been found necessary to discuss guidelines for dividing service time for cooperative personnel among various duties and districts at an early stage. Cooperatives tend to vary across the United States, some finding it effective to allocate district costs for the cooperative staff on

the basis of the amount of time spent in service delivery in that particular district, and other cooperatives designating that staff be paid on an equally split basis no matter where services must be delivered.

C. Using Parent and Community Resources in the Schools

Another particularly successful strategy of meeting special education mandates while optimizing limited resources involved actively using parents and other community resources in the school. Because of the true "sense of community" in rural areas, individuals have been found more likely to volunteer (Offices of Rural and Human Development, 1976).

An effective practice involved conducting a formal assessment of such resources. Potential volunteers were surveyed regarding their: (1) areas of expertise, (2) other resources such as time, and (3) preferences regarding how they would best offer their resources (offering options ranging from formal classroom presentations to field trips and observations or assistance with child-find activities).

The complete data bank included information from certified, retired, and/or unemployed teachers who can provide a variety of resources such as (1) assisting with individual student problems, (2) legally substituting for the regular teacher who can then observe a master teacher demonstrating a particular technique, design materials, engage in another staff development activity, or work with an individual student, or (3) demonstrating effective practices for the regular teacher.

In programs in two states, retired teachers responded eagerly to this approach which allowed them to remain involved, according to their own time priorities, in a field which they remain committed to. Unemployed teachers also responded positively to involvement which can be readily documented for future employment applications in an era of intense competition for scarce employment.

Senior citizens were also found to be an invaluable resource with, generally, a high level of interest in young people and relatively flexible time schedules. Involving senior citizens also used an inherent characteristic of most rural communities--having a large number of elderly individuals as residents.

The above practices also assisted administrators in anticipating demands from parents of "normal" children for similar benefits of handicapped children such as IEPs and due process procedures. The use of natural community grapevines, particularly in small communities, and the power of positive opinions of peer parents has been demonstrated an effective resource.

It is recommended that ne of the two options below be incorporated in use of the data bank.

1. A specific school staff member be accountable for coordinating scheduling and securing documentation of volunteer assistance. (This person may be a secretary.)

2. Periodic reports by individual teachers coordinating their own volunteers be submitted to a central district office. This will allow the district to communicate with the community the effectiveness of the process, continuing to enhance school-community relations.

It is also suggested that, whenever possible, community members who can serve as role models of successful handicapped individuals to be used as school resources.

D. Initiating a Management Information System to Optimize School and Community Resources

A comprehensive Management Information System (MIS) to optimize school and community resources in efforts to implement special education mandates in ways beneficial to all students was an especially effective practice. Processes of initiating the MIS are described below:

1. Conduct a Needs Assessment at the total school and individual classroom level (see Marrs & Helge, 1978).

2. Conduct a resource survey of all school personnel, listing skills and competencies that could be shared with others and/or used with children with educational problems. Include community and parent data in the MIS data base. (See Section C, above.)

3. Via a manual card sorting or a computerized retrieval system, link identified resources and needs. Wherever possible, relate this to IEPs and to identified needs of individual nonhandicapped students. For example, link one teacher who needs to see an effective demonstration of Task Analysis and implementation of Applied Behavioral Analysis with another teacher who uses these skills regularly and effectively with handicapped and nonhandicapped students. Facilitate this interchange by using a retired teacher, a parent volunteer, and/or an unemployed certified teacher to manage the former teacher's classroom while he observes the latter.

Asking school personnel and community volunteers their particular areas of expertise which can be shared with others is a complimentary approach which builds favorable attitudes of those groups toward school leadership personnel. Simultaneously, an evolving foundation of school resources is established which can easily be evaluated.

E. Using High School Students for Mutual School-Student Benefits

A related strategy which has proven highly successful is training high school students to assist with services such as physical and occupational therapy. One system supervises students enrolled in home economics in this experience (1) for credit, (2) to enhance the high school students' understanding of handicapped individuals, and (3) to facilitate effective mainstreaming.

F. Interfacing with University Personnel Preparation Programs

Where geographically possible, developing interfaces with university personnel preparation programs to appropriately link pre- and in-

service education has provided additional resources to rural schools. School systems and universities have much to offer each other's constituents. Using a data system of (1) university faculty areas of expertise, (2) student learning needs, and (3) needs and resources of the field, relevant resources and needs can be linked for mutual benefit of a school district and a university. Pre- and in-service students frequently evaluate their most relevant learning as emanating from involvement with practitioners and observing or assisting university faculty working in school systems.

III. Coping with Long Distances

A. Regional Information and Technical Assistance Systems

One SEA has implemented a computerized mail system whereby the state department can communicate instantly with every district in the state. Individual districts also have the capacity to communicate with each other.

The state has developed courses to be taught using this system. Although currently only basic high school courses are taught in a limited number of districts, the system has the potential to be used as an inservice system.

Another SEA has placed most of its state special education personnel in several regions throughout the state. This has enabled the state office to almost daily be in contact with local personnel to provide technical assistance. Staff are provided to assist regular education teachers as well as special education staff.

This closeness to the field has greatly facilitated community information and awareness programs. In addition, it has disintegrated some of the strong suspicions among rural staff.

B. Effectively Filling "Down Time"

The long distances between schools, homes, and rural services offer educational technologists one of their most serious challenges to developing ways to provide full, appropriate educational services to rural handicapped students.

One of the most common problems was vocalized by rural professionals who must travel from 45 minutes to a day or more to reach their next service destination, with the omnipresent risks of being delayed by blizzards or floods, was "professional down time." Service providers were nonplussed by hours of low-stimulation travel. One ameliorative practice was to use portable tape recorders, dictaphones, or eight-track tape players to audit formal or informal inservice tapes recorded by individual professionals, districts, intermediate or state education agencies, or commercial organizations. Consultants may also use such equipment for recording case reports or "teacher information/inservice exchanges."

Some school buses have been equipped with multi-track tape equipment. Through individualized taped programs and headsets, students have been able to use long bus rides to school or services for educational purposes.

IV. Strategies Regarding Recruiting and Retaining Trained Professionals to Rural or Remote Areas

As recruiting and retaining qualified professionals were the most serious problems identified by SEAs (94% of the 19 SEAs sampled), resolution strategies are vital to successfully accomplishing other aspects of implementing PL 94-142.

A common practice for years in rural schools has involved hiring teachers reared in rural areas and thereby reducing the cultural shock

likely to an external entrant. As mentioned earlier, however, this strategy has frequently resulted in (1) less qualified staff and/or (2) a culturally limited perspective being available to rural children. (For example, in some of the districts in sparsely populated ranching country, 2-25 children spend their entire educational career with 1-4 teachers.)

A more common strategy involved retraining regular education staff who more than likely would remain in the area. Some states and school districts have funded the teachers' efforts to obtain special education certification. Other variations have included facilitating college and university offerings in rural areas. These efforts have not occurred without serious financial and organizational barriers. However, a successful model initiated by two rural universities assuming the role of providing "responsive" teacher education included (1) a comprehensive needs assessment of administrator, regular and special educator, and support personnel needs, (2) cooperative planning with potential trainees (which actually involved teacher designed/negotiated inservice programs), and (3) flexible inservice scheduling to meet trainee needs.

Cooperative planning among potential trainees and other organizations and agencies designed to meet inservice education needs (such as teacher centers, educational labs, and educational service centers) is advisable.

Some rural schools and states have effectively used a fairly widespread national characteristic--competition--to attract people to small communities which, often out of necessity, live via cooperative efforts. This approach has often combined with the attraction of living in (sometimes scenic) rural communities with less hurried lifestyles, little traffic, and generally unpolluted, friendly communities with natural outdoor sports opportunities. One successful state advertised its rural positions in large,

urban cities with high pollution indices, frequent traffic problems, and other metropolitan characteristics which also have a myriad of dissatisfied teachers and specialists hoping to "escape" for a unique experience they can relate to their friends.

Several of the districts in this state received thousands of applications each year for many of their one-room schoolhouses in very isolated areas. As their advertisements further stated that only the most qualified applicants would be considered and personnel selected could only stay two years, so that others might share their culture and perspectives with the students (sometimes as few as four) in the school, competition increased for the few jobs which offered this experience.

Other districts called institutions of higher education and requested names of the highest ranking graduates in the field in which personnel were needed. School administrators then called the recommended graduates, explaining their penchant for quality and why they were interested in that particular graduate.

Obviously, screening of persons unfamiliar with rural areas or a certain type of rural subculture should determine that the potential employee's interests, aptitudes, and personal goals are compatible with the area. Able rural administrators realize the value of balancing insiders who understand the particular culture with newcomers who can offer unique cultural perspectives.

Some administrators employed informal checklists when interviewing persons external to their community including some of the following points:

1. Will the interviewee's personal traits and goals be compatible with those in the area and not make him excessively vulnerable to the close vigil of many rural areas?

2. Can the community provide the necessary social opportunities for this applicant who is interested

in the professional opportunities in the district? (One of the primary reasons people leave rural areas is a lack of the particular social opportunities that interest them.)

3. Will the position provide a realistic challenge to the applicant?

4. If the area is isolated or remote, does the applicant have hobbies or other pastimes which initiate self-entertainment and self-sufficiency (e.g., wood carving)?

5. Is the applicant willing to listen and genuinely interested in learning about the unique aspects of this particular community?

6. Is the applicant flexible enough to cross interdisciplinary and position lines as required in an area of scarce specialized resources? Is he able to cooperate with people of different viewpoints?

7. Is he creative enough to assess attributes of the community and produce educational resources from what already exists?

Once an applicant from outside the area was selected, the district's challenge was to orient him to the community and provide incentives which would enhance his desire to stay in the community. One successful orientation method was involvement of a district "old-timer" and a person who was also recruited to the district from another area one or more years before to formally or informally educate the newcomer about the social mores of the area. The following have been found effective incentives to retain qualified personnel:

1. Leadership positions in an activity designed to enhance external cultural perspectives of students or faculty.

2. Intra- or inter-district temporary faculty exchange programs.

3. Inservice involvement incentive systems including release time, college credit, and certificate renewal (see Section VI of this chapter).

4. Special challenges or assignments, particularly when affiliated with university pre- or in-service preparation programs.

5. Merit increases and other approaches to recognize extraordinary performance.

6. Stress reduction activities such as those listed in Section V of this chapter.

V. Inhibiting "Teacher Burn-Out"

As school personnel are being asked to fill an increasing variety of roles, stress reduction activities have been initiated in some rural districts to avoid "teacher burn-out." Successful strategies include:

1. Formally or informally structured "venting" sessions

2. Social functions

3. Desensitization exercises (e.g., to overcome fears of dealing with certain disabilities or parents of handicapped students)

4. Physiological stress reduction exercises

5. Personalized values clarification exercises.

VI. Enhancing Inservice Incentives, Accessibility, and Quality

The Management Information System described in II-D of this chapter has been found effective in providing release time for teachers to be involved in formal and informal inservice opportunities. This has also been used to cut inservice costs as the district can avoid paying substitute teachers.

The most frequently used extrinsic incentives for participation in inservice activities have been release time, college credit, and potential for certificate renewal. Examples were reported in Section IV of this chapter.

Intrinsic rewards have obviously been enhanced by continuity of relevant staff development opportunities based on comprehensive needs assessments and incorporating local personnel as planners as well as implementers. "One-shot" presentations by outside experts were noted as ineffective in ameliorating resistance to change. In fact, they were often perceived as imposed threats and solidified resistance.

Educational television can also be used to broadcast and receive information such as inservice content and demonstrations which are occurring or have taken place in locations where district employees cannot travel because of lack of funds or substitutes, adverse terrain, or inclement weather. This technology has also been found to be an effective tool for community education.

One state in the northwest has developed and is refining a computer access system for all schools in the state. The data bank will not only include educational resources stored in such systems as ERIC, but will also include data on promising practices in the state. This program will serve not only as a vehicle for ongoing inservice, but will also provide immediate assistance to teachers faced with newly mainstreamed handicapped students.

Another state in the mid-America region is seriously exploring the feasibility of developing and implementing a remote communication system utilizing communication satellites. Exploratory plans call for trained paraprofessionals to be placed in remote areas and supervised by master teachers. The master teacher and paraprofessional would be able to interact through remote video equipment so that the master teacher could model services as well as observe the actual performance of the trained paraprofessional.

A system of this nature would provide a very needed alternative to remote areas which currently resort to paraprofessionals but are unable, because of limited professional staff, to provide appropriate consultation and supervision.

Although many states in their Annual Program Plans stated that paraprofessionals could effectively fulfill up to 65% of new personnel needs for implementation of PL 94-142, this practical manpower source has

not been widely adopted in rural schools. This approach, demonstrated and validated, is especially valuable in the prevalent types of rural areas that offer more trust to indigenous paraprofessionals than to other service providers.

Another cost-effective inservice alternative has been regionalized or cooperative inservice offerings jointly financed by two or more LEAs. Cooperative inservice offerings have best addressed generic needs on a continuous basis with follow-up and district-based needs being addressed locally.

Inservice for regular teachers has been greatly facilitated in districts employing a consultant or itinerant teacher model such as the Responsive-Consulting Teacher Training Model initiated between the Vermont Department and the University of Vermont. Local districts have employed this model to provide teacher consultation (inservice) regarding assessment, program planning, and implementation for mainstreamed handicapped children.

In the founding state, the consulting teacher is an adjunct faculty member of the state university and is, therefore, able to conduct training for others in the school system and offer university credits and professional development units. Limited numbers of tuition waivers were also available, and participating teachers received financial benefits via credit hours toward salary schedule advancement.

VII. Enhancing Child Find Resources

Many states and communities have successfully trained mail, milk, and newspaper carriers, utility personnel, meter readers, telephone service personnel, and other individuals who routinely visit individual dwellings in rural areas to assist in initial screening and identification efforts. "Welcome Wagon" representatives and utility and telephone companies generally

have lists of new families entering an area, and these are usually available to the public. As so many rural handicapped children are unidentified and unserved (Education of the Handicapped, June 6, 1979), it would behoove more districts to involve individuals who "know where people are." Sunday school teachers and other church-related individuals in religion-oriented communities can be invaluable.

As health care is typically inadequate in rural communities and informal communication generally much stronger than formal lines of communication, adept school administrators will go beyond the typical child find newspaper advertisements and searches in public health clinics to grocery store posters and involvement of local social groups such as Wranglers' Clubs.

One northeastern state implemented a parent-facilitated clearinghouse to assist in identification of handicapped children. As it is not uncommon for parents of handicapped children at rural sites to be reluctant to seek help for their children, the director of special education used public radio and other media announcements to inform parents that such feelings are normal. Parents were invited to contact parents who had previously experienced the continuum of emotions involved in identifying a child's handicap and had a positive relationship with the school, for more information. As a result of these efforts, a Parent Support Group was formed as a network to identify and facilitate services for handicapped children. The Parent Support Group has resulted in closer cooperation between school personnel and parents as well as generating parent support systems.

VII. Strategies to Ameliorate Isolation and Communication Problems

Where affordable, helicoptering or otherwise transporting services to teachers and students or vice-versa, has been used effectively. In two states, many local districts own or share small airplanes. Due to the

rugged geography of one state, many private citizens have pilot training and sometimes access to their own aircraft. Small districts are sometimes able to use these skills as community resources to the schools.

Many districts located where rugged terrain such as mountains or cliffs and lack of telephones inhibit parent-school communication and parent involvement or follow-through of special services use Citizens' Band (CB) radios or telecommunications. One CB radio can serve several families or sometimes an entire isolated community.

Burrello and Sage (1979) described three types of telecommunication systems useful in rural districts.

1. A telephone may be installed in the home for teacher-parent-student communication.

2. Home-based educational television may use programs produced by a district or State Education Agency or may involve one- or two-way communication between a student's classroom and home. (This strategy was used in Ohio during inclement weather when students could not get to school.)

3. Telecommunications may also be used for administrative contact with the school while an administrator is away from his office.

In terms of instructional materials, mobile resource vans have been an effective means of enhancing access to limited resources.

IX. Resolving Cultural and Language Difference Problems

This area, in particular, is receiving considerable scrutiny as the 1979-81 NRP studies 80 LEAs for problem-solving strategies. Thus far, the project has identified the use of inservice training to enhance awareness of and sensitivity to cultural and language differences. In many cases, the greatest need is for bilingual, bicultural diagnostic and prescriptive staff and most rural schools have been unable to attract such scarce resources.

Contractual services have been used. However, the general level of acceptability of such services has been poor.

X. Overcoming Negative Attitudes Between Teachers and Support Personnel

Pro-active administrators have constantly encouraged and implemented creativity in programming and staffing--breaking down traditional barriers in structured interactions among school pesonnel. Teacher exchanges and part-time assignment of personnel to resource positions have been found particularly effective. The MIS (Section II-D of this chapter) or a more informal system may be used to initiate temporary exchanges of regular and special education personnel to increase their understanding of each other's positions, roles, and enhance attitudes toward each other.

Conclusion

Innumerable other strategies will be identified during the 1979-81 National Rural Project and profiled relative to specific district and community subtypes so that LEAs, SEAs, and universities can modify strategies for particular rural districts. A district or school is usually only truly limited by imagination of creative alternate ways to use the scarce resources available in rural areas.

A major goal would be to surpass the philosophy of choosing between a predetermined set of alternatives usually viewed as the "lesser of two evils" and focusing on creating and modifying alternatives after a thorough resource as well as needs assessment. Effectiveness and efficiency should be carefully analyzed and strategies focused on reifying the Least Restrictive Environment concept.

An underlying inherent resource of rural schools is that not only have rural professionals been asked to be "all things to all people," but

that rural America, in general, has been asked for years to solve its own problems as urban areas took priority in monetary and other resources. It is possible that independent community problem-solving examples from rural areas may be paragons for a country striving to solve energy shortages and other crises.

One of the most exciting aspects of problem-solving in rural special education delivery systems is the potential of positive changes for all students, handicapped and nonhandicapped. Through design and implementation of creative alternatives, many special education innovations will be infused into the total education system. Infusions of special education philosophies and methodologies such as individualized instruction, Task Analysis, etc., will have positive school-wide impact. The efficiency of rural communication systems will facilitate this success.

RESPONSES TO IMPLICATIONS OF THIS STUDY

As a result of the critical needs identified in Phase I, the 1978-79 National Rural Research Project, the Bureau of Education for the Handicapped Division of Personnel Preparation funded Phases II, III, and IV, the 1979-81 National Rural Research and Personnel Preparation Project.

Three main statistical analytic strategies are being used to interpret project data, answer project questions, and prepare information for personnel preparation model development and service delivery training phases. First, the multi-variant correlation and factor analytic techniques are being used to determine appropriate dimensions, and grouping into statistical and logical patterns.

Second, discriminate function analysis will be utilized to determine the factors that contribute to school districts' effective and less effective compliance with Public Law 94-142. The results of these analyses will be used as sources of information for model development and service delivery training.

Third, linear multiple regression analysis will be applied to the identified district and strategy types to determine optimal matches as a basis for developing the personnel preparation models.

Based on these analyses of Phase I data, Phases II-IV will proceed as outlined below.

Phase II. Development of Profiles of Effective Service Delivery Strategies Given Particular School District Characteristics

A. Utilize characterization data delineated in Phase I to develop patterns and profiles of

effective service delivery strategies given particular school district characteristics.

B. Assess the matching of selected districts to profiles of effective administrative and program strategies.

C. Identify factors or clusters of characteristics that relate to particular effective service delivery strategies in the most cost-efficient manner.

Phase III. Development of Innovative Models of Personnel Preparation for Effective and Efficient Service Delivery to Handicapped Children in a Variety of Rural Subcultures

A. Based on data gathered nationally via Phases I and II, discern personnel competency needs for special and regular educators in:
   1. leadership roles
   2. teaching roles
   3. paraprofessional roles
   4. support roles

B. Design appropriate pre- and in-service personnel preparation models related to relevant alternate service delivery systems. These models should stress the creative use of scarce professional, material, and other resources.

C. Develop data accurately portraying the types of special education and supportive personnel needed in rural school systems and the specific pre- and/or in-service training they require.

Phase IV. Dissemination of Innovative Personnel Preparation Models

A. Disseminate a document of Profiles of effective service delivery strategies given particular school district characteristics and a model programs directory.

B. Field test four inservice Personnel Preparation Models in at least four geographically representative LEAs, focusing on systemic change processes and service delivery systems determined effective as per the Profiles developed in Phase II.

C. Conduct a National Institute for Change Agents in Rural Special Education, including university professors, and representatives of state and local education agencies to disseminate training models and materials for leadership, teaching, support, and paraprofessional personnel training.

D. Utilize other dissemination vehicles regarding project profiles and materials including the computerized Management Information System, the National Rural Project school Newsletter, journal articles, educational and convention presentations and displays.

E. Continue collaborative efforts between the NRP and all major groups interested in rural special education. Relate as requested with the BEH Rural Advocate and Rural Special Education Task Force to enhance the abilities of rural schools to effectively implement PL 94-142.

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APPENDIX A